OS/2 FOR CORPORATE AMERICA
JANUARY 1994, VOLUME II, NUMBER 1

OS/2 PROFESSIONAL

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INSIGHTS FROM RICH MALLOY, MICHAEL KOGAN, WILL ZACHMANN, BRAD KLIEWER & EDWIN BLACK.

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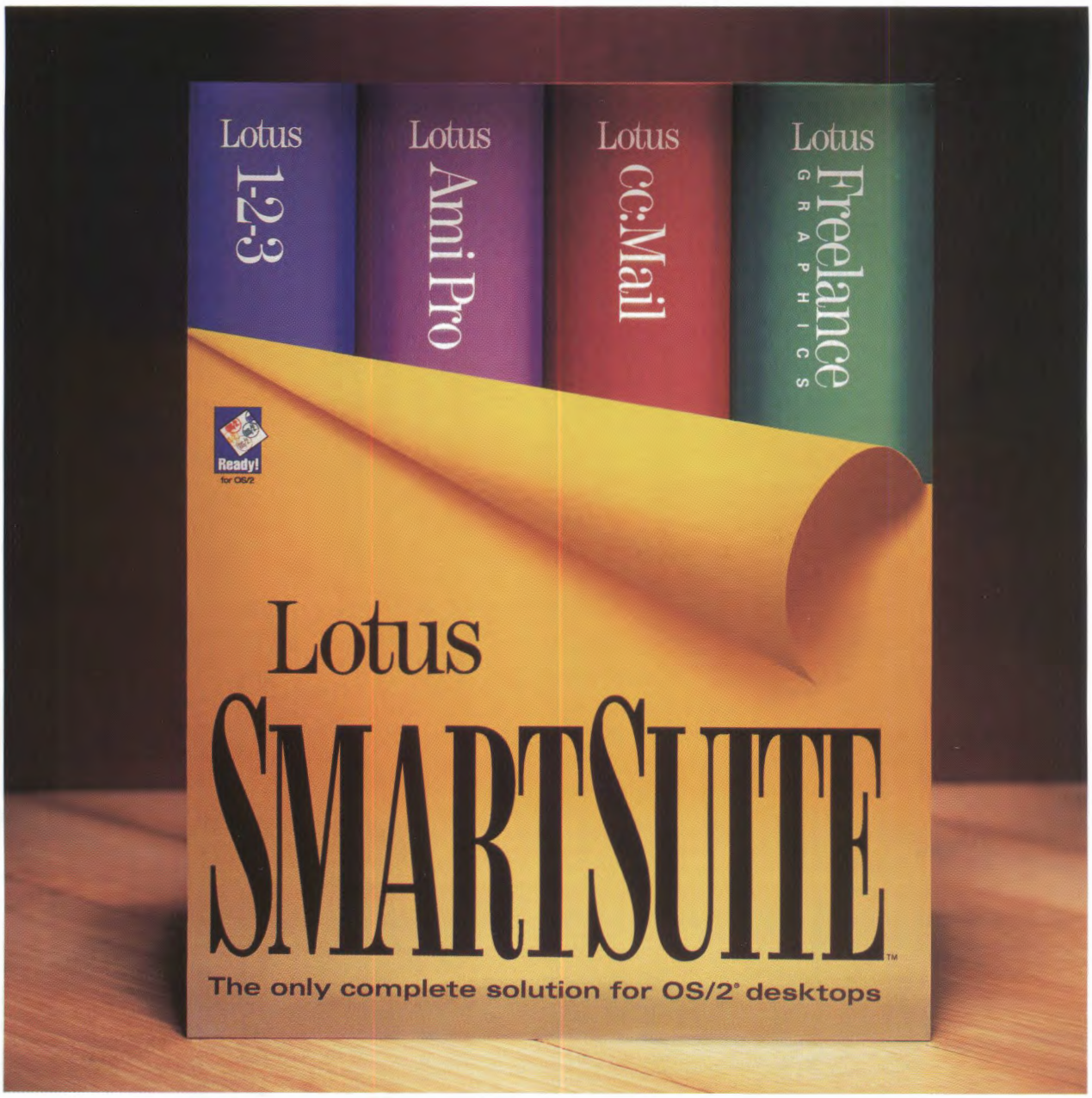

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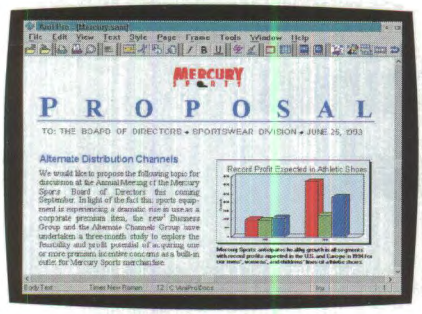

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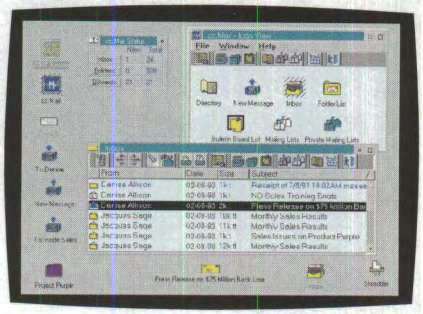

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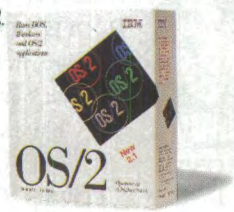

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Circle #186

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JANUARY 1994

THE MAGAZINE FOR OS/2 PROFESSIONALS

VOLUME II, NUMBER 1

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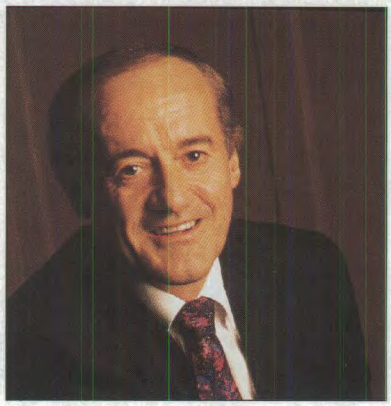

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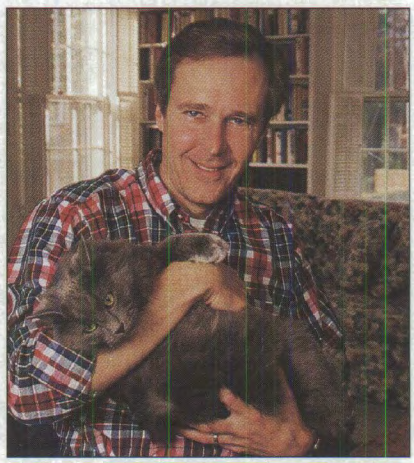

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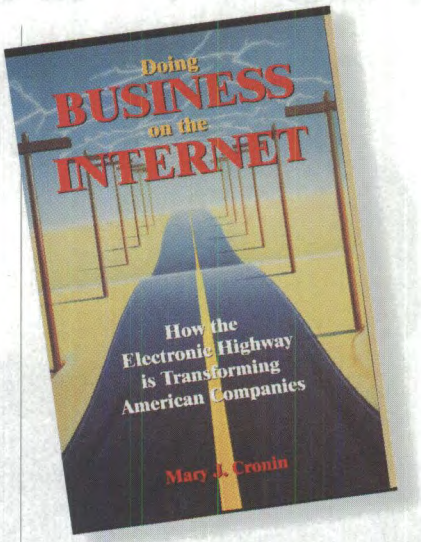

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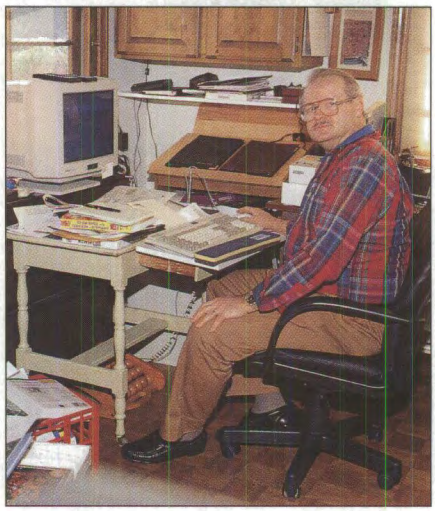
TECH TALK



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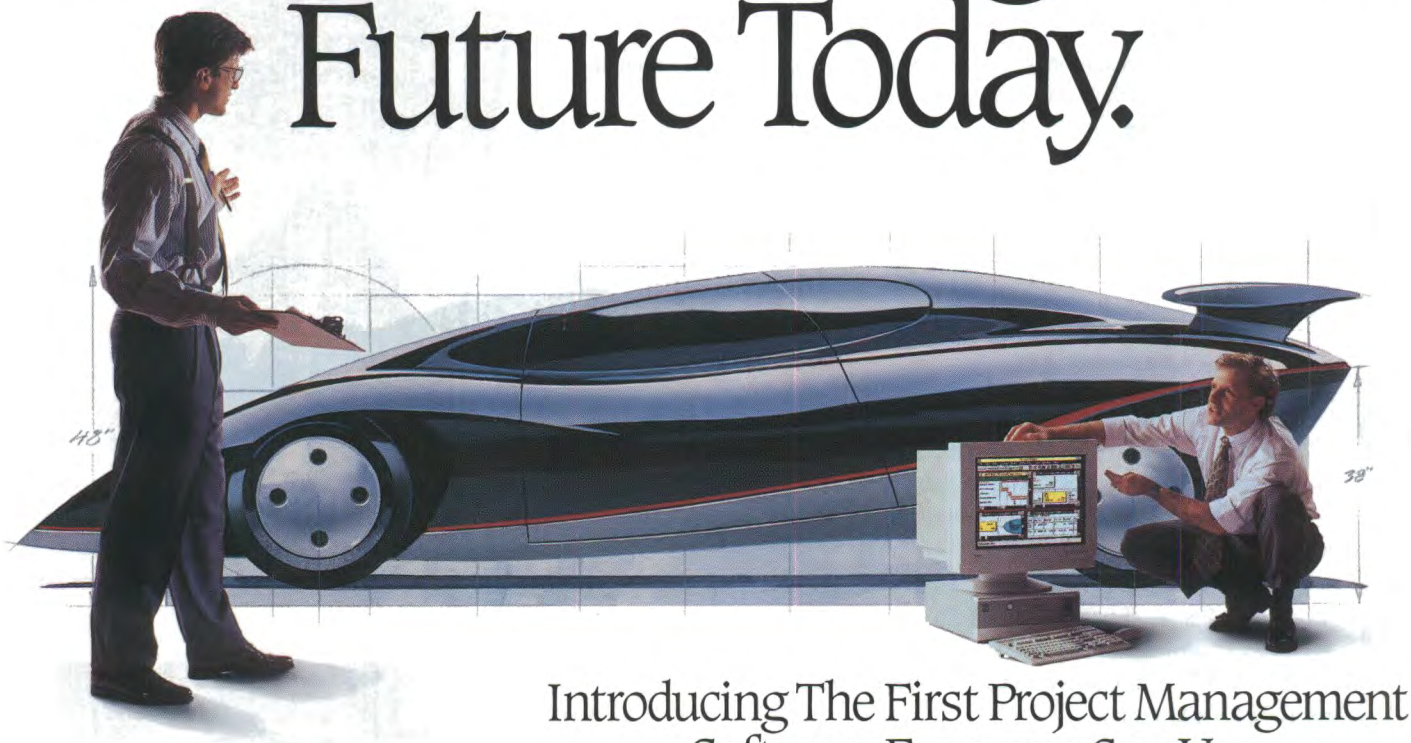

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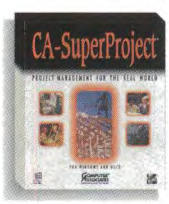

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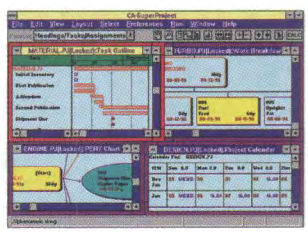

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Circle #122

OS/2 in '94

Last year was as exciting and frustrating a roller coaster ride as anyone could have scripted for OS/2. In the span of 12 months, it went from the laughing stock of the computer world to the most promising product of the year. IBM also had its ups and downs, going from rock bottom to one of the most impressive comeback stories in recent memory. But with IBM and OS/2, nothing lasts long. So what's in store for '94?

Where is OS/2 today? The OS/2 market installed base now numbers more than 4.5 million worldwide and is expected to double by year's end. That installed base is split roughly 50-50 between the USA and the foreign market. Roughly 90 percent of the installed base is in the corporate market, especially medium to large corporations, according to senior IBM sources. The approximate numbers break out as follows, according to those same sources: 40 percent at large corporate sites of 500 employees or more; 30 percent at so-called "medium" sized sites of 50-500 employees; 20 percent at the smallest companies (20 or fewer workers); and the remaining 10 percent on home systems.

Where is the app market? However, the growth curve for OS/2 itself is far outstripping the growth curve for native OS/2 applications. OS/2's inherent power and flexibility, allowing people to use their existing DOS and Windows products more productively, means that the market for native 32-bit apps will not experience explosive growth this year, but will experience rather what we call "methodical evolutionary growth." Last year presaged the way. For example, the installed base of a leading native OS/2 application began 1993 at 50,000 and only increased to some 75,000 by Christmas—this during a period when more than a million additional Americans joined OS/2.

Simply put: the end-user market, broadened though it may have been by the OS/2 for Windows effort, will not install OS/2 on Monday and then purchase all new apps on Tuesday. Growth in the end-user market will be much slower than growth in use of the system until sometime late in early 1995, when the steady accretion of OS/2 by virtue of its sheer volume yields greater dividends to major developers.

But there is good news for application developers this year. The strongest segment for application market growth is corporate, where multiple-site licenses yield four-digit purchases at a time. And in 1994, the corporate marketplace will boom for OS/2. Indeed, in late December, IBM announced that PSP operations will now be under the direct control of the IBM senior executive in charge of high-end commercial offerings.

IBM knows the curve for native applications is less steep than the marketplace for the system itself—but it is desperately trying to avoid anyone else realizing it. Nonetheless, others have realized it—for example, DeScribe and WordPerfect. WordPerfect is no longer marketing its OS/2 word processor. DeScribe still is, but has found no gold mine.

This represents a complete turnabout. Back in the 2.0 days, people in the know—myself included—used to say there is no operating system without good native apps, and no native apps without a good operating system. That's all changed, courtesy of IBM. OS/2 is now so backwardly compatible and so forwardly promising that it provides corporate America with an instant productivity injection while preserving the human and financial investment in existing DOS and Windows apps. At the same time, it unlocks a future that is evolving toward powerful native 32-bit applications (after they're optimized), from thence to the Workplace OS and ultimately to the OOzone. That's why native OS/2 apps no longer are essential to the current proliferation of OS/2. But they do represent a future benefit to be tapped as quickly as the market agrees.

OS/2 in 1994. You'll find that OS/2 becomes leaner and meaner this year when version 2.2 releases, probably in mid-year. Running reliably on 4mb of RAM and hogging less disk space would help bring an entire class of 386 machines on line. Nearly all companies have a fleet of 386s that cannot cost-effectively be upgraded to 8-16mb of RAM. The new release will signal another wave of major expansion in the corporate sector in Q3 and Q4. Expect another major struggle just about then as Microsoft's Chicago pulls into town with a true OS/2 competitor.

Where is IBM? Unfortunately, the fortunes of OS/2 are tied directly to the misfortunes of IBM. Therefore, the health of IBM

and its ability to continue aggressive development and support are of vital interest to every IS manager who invests in Big Blue.

Unquestionably, IBM turned the corner in 1993. Personal Software Products was reorganized, refurbished, and redirected. Lou Gerstner swore off half-baked visions in favor of hard-baked realism. A cadre of talented new people were put in power: Bill Rich, Dave Proctor, Pete Hayes, and John Osborne. As a result, IBM press relations were excavated from the Neolithic level and IBM products are now visible at the retail level.

Some fairly aggressive and innovative marketing decisions were made by IBM and its advertising agency Lintas:NewYork. Most importantly, Microsoft stumbled with NT. It proved to not really be a competitor for OS/2, nor a match on the desktop. Indeed, let us never forget that IBM won this round of the OS war only because Microsoft lost it.

Now that IBM has turned the corner, can it keep up the momentum? Answer: Probably, but it will be tough. Right now, IBM is going through so many additional adjustments that there is no way to predict what type of organization will emerge shortly after this issue appears. In just the last quarter of 1993, the Personal Systems layer above PSP disappeared; James Cannavino and John Patrick moved to other assignments; Bill Rich's portfolio was redefined; Dan Lautenbach was installed as PSP's new marketing honcho; Taligent was taken to the woodshed and told "gimme now"; Federal Systems was sold; WordPerfect 5.2 abandoned OS/2; Lotus gave up control of its SmartSuite to IBM; and despite considerable progress, PSP was brought under tighter control by IBM corporate. Gee, excuse me for blinking.

All this reorganization and relocation is halting IBM's forward motion. For instance, as of Christmas Eve 1993, when this forecast is being written, IBM still has no approved marketing plan for '94. Its Q1 will still be a frenzy of catch-up and we wish we could.

The pain of progress. The rules of the game are being rewritten hourly at IBM. Product manager and marketing executives are learning that IBM no longer wants to chaotically promote dozens of products simultaneously. Their plans for proliferation are being frustrated by IBM corporate control freaks. That in itself is not a bad idea. Most of the product managers making marketing decisions have questionable qualifications to make such decisions. At the same time, really sharp product managers who know their field are being body blocked by the rest of their peers.

One particularly problematic rule that will be enforced with

increasing frequency is that no publication will be allowed to run more than three IBM-logoed ads in a given issue without a specific override. This edict—a right-minded attempt to reform out-of-control advertising activities—has been on the books for years, and agency computers have long been programmed to add muscle to the rule. Last year, as part of IBM's dramatic turnaround, overrides were often given.

But in 1994, case-by-case overrides will have to be predicated on a compelling justification, such as a new product launch or a new ad campaign. This policy, more suited to a small company than an industry giant with so diverse a global product line, will create a bureaucratic nightmare. In the opinion of some product mangers and marketing execs, the rule will "handcuff us."

Product managers and marketing execs will learn only after they already have planned their advertising whether or not they got lucky, or will have to call Marketing and Services for an override. One marketing source told me, "I don't think I'll be willing to call up every week to ask if I can break the rule."

In practice, if the PowerPC, ThinkPad, and NetView schedule ads in a given issue of a weekly, then OS/2 cannot advertise without a specific override. Often, it is humanly impossible to make the contacts necessary to obtain the override before issue deadlines pass. Apply this rule to an OS/2-specific magazine, such as *OS/2 Professional*, and the effect on communication and proliferation within the corporate community can clearly be seen—particularly given the multiplicity of OS/2-exploiting IBM products emerging this year.

IBM is so concerned about this policy that our magazine was threatened with the loss of all advertising for February when we broke the news in *OS/2 Week* several weeks ago. The threat was rescinded after we promptly told the IBM executive to go straight to hell and not collect $200. But that's the kind of lack of accountability that has allowed IBM to get into trouble. And it is a another reminder that this magazine needs to be independent from its advertisers. That's why we are systematically converting our readership from controlled by signed request to paid.

In fact, if you reject the idea of an OS/2 publication under the thumb of advertisers—big or small—now is a great time to turn to page 32. Do it now, even before you finish this memo. In 1994, OS/2 will continue converting the corporate world to preemptive multitasking. And *OS/2 Professional* and *OS/2 Week* will be your company's guide to its ups and downs. ◆

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Editor's Office: Bradley D. Kliewer, Editor, 4604 Chicago Ave., So., Minneapolis, MN 55407, Phone: (612) 823-2657, FAX: (612) 823-7945, MCI Mail: 470-2447.

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INPUT

Comments, criticisms and observations

Praise and other things

Congratulations on the publication of a truly fine magazine! As Mr. Cargill said [October], I am surprised that you printed Don Feinstein's letter in the July issue. Not because he didn't support his claims, since I wholly agreed, but simply because of its critical content. Anyway, I need to add my input to the discussion, because OS/2 2.0 would not load into my PC, either. After about five attempts, I realized that OS/2 was incompatible with my BIOS.

The only reason I am using OS/2 (version 1.3) is that someone wrote an operation program, that I have to use, that will only run under OS/2. IBM told me how much better 2.0 would be, but it won't even load onto the hard drive. If they truly have fixed it with version 2.1, I'll never know, because I'm not going to risk my time and money on it.

IBM is probably suffering more than they know for unleashing 2.0. Any product that turns so many consumers off is bound to have a serious effect on the bottom line. In this attempt to remain in the running with a stopgap release, they gave Microsoft the needed time to prove Windows 3.1, cementing Windows' lead.

If IBM stood behind OS/2 to the extent that they would offer a no-charge upgrade, I'd try it, but really, how much can the consumer be expected to suffer? This is why I am sticking to Windows under DOS for my desktop applications, both business and personal.

Andrew Hoffman
Colorado Springs, Colorado

A success story

After reading all the letters about the difficulties people were having with OS/2, I thought I'd offer a bit of a counterpoint with a success story. I manage a Novell network which is used for, among other things, a large shared database that runs under DataEase. DataEase is a good program, but it is a bit slow and it requires gobs of memory. I've spent hundreds of hours over the past five years playing with QEMM386 and high memory: loading drivers and TSRs high; reloading them low when they don't work; loading them in a different order to get just one more up there. Then, of course, a new driver will come along and require me to do it all over again.

One of the nicest things about switching to OS/2 was giving up the memory game. Since I put 2.0 on a year ago, I haven't even had to think about memory and TSRs on my machine. What a relief. DataEase runs fine in a window and I can give it all the memory it wants.

The day that *OS/2 Professional* came, I was asked to run out three different DataEase reports. Each report is over 100 pages long and generally takes up to 40 minutes to create (not counting printing time). I just fired up three separate copies of DataEase and started the three reports running. I minimized the windows and went about my other work. A couple of hours later the reports were done and I hadn't had to give up any time on my machine. There's no way I would ever go back to Windows and DOS. I can't even run one copy of DataEase under Windows. I finally feel like I'm getting full use out of my computer.

On a separate subject, in the [October] Tips and Techniques column, Gordon Scott says, "You can't move a template through drag-and-drop (that just gives you a copy of the template's base object). Therefore you must use the pop-up menu to move or copy a template." You can in fact move a template just by holding down the shift key while you drag it. Keep up the good work.

Richard W. Beebe II
New Haven, Connecticut

Tell the whole story

I received my first issue of *OS/2 Professional* yesterday, and spent the evening digesting each and every page! I enjoy the magazine very much, but I have some concerns regarding your product reviews.

In your November issue, The Publisher's Memo stated that your magazine is committed to providing truthful and non-whitewashed reviews of products, even in the event of pressure from advertisers.

I am not happy with your review of Microformatic's Fax/PM [Connectivity/November]. I recently purchased this product because I needed a good solid product to use as a PC-based fax. Your review implies that Winfax-Pro is the gem to compare to, and as an old Winfax-Pro user, I must say you are wrong. Winfax-Pro v3.0 is a very feature-rich product, but as far as stability is concerned... three maintenance releases later, Delrina still cannot get the product to work reliably. Winfax in particular does not work well under OS/2, no matter how much you tweak the objects session settings.

Fax/PM on the other hand is a solid product that does indeed deliver its primary function. I have never had a problem connecting to any fax machine or fax modem with this product. It is, however, still in its infancy stage of development. The interface is shabby, buttons don't line up, and dialog boxes are not as convenient as they should be. The code might be solid, but it certainly is not a very tidy product. As far as features, I was very disappointed with the limitations of the product.

If Fax/PM could aspire to be as feature-rich a product as Winfax-Pro, and actually work, then it would be a blockbuster hit. If you intend to help people make decisions about products to use, then I request that you please tell the whole story. When we start demanding quality throughout a product, then and only then will we gain the respect of vendors. Then we will see products that not only work, but have an intelligent user interface that won't be a shoddy throw together piece of work.

Christopher Crocke
Boston, Massachusetts

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BYTES & PIECES

News and trivialities, important and obscure

OS/2 2.2 advancing

Despite denials by IBM officials that the product has entered beta testing or even exists, the improvements that will be OS/2 2.2 are working their way through the software labs in Boca Raton.

Knowledgeable observers told *OS/2 Professional* that those improvements will include: reliable operation in 4-8 MB of RAM instead of the 8-12 currently required; new security hooks, allowing third-party software developers to produce security tools for the OS/2 environment; new mouse and screen pointer software technology to make screen navigation easier; some version of a Win32 API; asynchronous input queues; and DSOM availability for use across processors (but not networks in this version). Version 2.2 will of course be DOS 6.0 compatible.

OS/2 2.2 will be positioned to preempt Microsoft's market push for Windows 4, alias Chicago, which is expected in late 1994. Look for the new version of OS/2 earlier than the Fall Comdex release originally expected, perhaps as early as PC Expo in late June.

WordPerfect 5.2 leaves OS/2—for now

With the release of version 5.2a of its OS/2 word processing software, WordPerfect Corporation has closed the current chapter in the word processor's OS/2 strategy.

The maintenance upgrade, shipped in December, offers users a REXX launcher and fixes a number of bugs. The fixes in the latest version, according to WordPerfect officials, will allow macros to execute faster, keep the product stable when the speller or thesaurus are in use, and offer improved access to AS/400 files.

The Orem, Utah, software company announced in November that WordPerfect 6.0 for OS/2, a product that is now essentially complete, will not be released. Instead, OS/2 word processor development will for the moment end with the most recent upgrade of 5.2.

WordPerfect thus opted out of a tough horse race with Lotus Development Corporation for command of OS/2 loyalties. WordPerfect 5.2, a 16-bit port that the company positioned as an interim product, suffered from performance problems and market analysts agreed that WordPerfect needed its planned native 32-bit OS/2 version to compete successfully against Lotus's Ami Pro.

In explaining the move, company strategists told *OS/2 Week*, which broke the story, that the projected return on investment for the OS/2 product "just wasn't there."

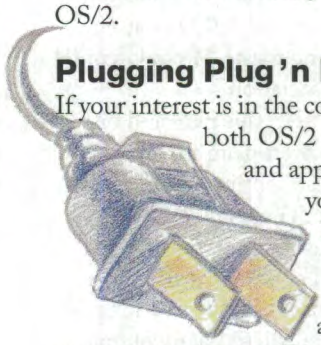
The decision was announced in a carefully crafted letter to customers from WordPerfect president and CEO Alan Ashton. In it, Ashton wrote, "We will continue to support OS/2 as a server but not as a client." In line with that, WP will continue to support its WordPerfect Office and Message Server.

Ashton's letter noted that "WordPerfect's OS/2 developers have been reassigned to integrate WordPerfect's Windows products with OS/2 Workplace Shell." Company sources indicated that the 6.0 Windows version of the word processing software will operate with some Workplace Shell-like drag-and-drop features under WIN-OS/2. Much of their work, however, is likely to involve preparing the application to run under Microsoft's Chicago, or Windows 4.0.

Informed sources suggest that WordPerfect's absence from the OS/2 marketplace is not permanent. These analysts suggest that the company, in the face of evidence that it lacked the time and resources to produce a competitive product at this time, cut its losses and will re-focus its energies on 32-bit development under both Microsoft and IBM operating systems on both Intel architecture and RISC platforms.

The departure of WordPerfect leaves DeScribe and Lotus's Ami Pro to divide the native OS/2 marketplace, with a substantial presence as well for Microsoft Word running under WIN-OS/2.

Plugging Plug 'n Play



If your interest is in the computer as both OS/2 environment and appliance, keep your eye on both Micro Channel architecture and the new campaign to develop "Plug 'n Play."

At Comdex, both Microsoft and IBM demoed a Micro Channel system that automatically configures itself when boards are inserted or removed. A technical matter of interest only to propeller-heads, you say? Not so! Most computer users have no interest in setting jumper switches and specifying IRQs or addresses, and in fact will actively avoid an upgrade that involves that sort of work. And any IS manager will tell you the department's techs will somehow manage to fill the time freed up by not having to configure newly installed components.

To make systems "plug and play," both companies are seeking to automate the error-prone task of configuring details like I/O port addresses by developing standard peripheral interfacing systems and building auto-recognition/auto-configuration into operating systems. Doing so would liberate PC users from ISA's confusing mass of jumpers and dip switches, and Micro Channel's confusing mass of on-screen options. Doing so, however, also means there must be some standardized handshaking between motherboard and add-in board, with the information then passed to the OS.

In the plug and play race, IBM has now one-upped Intel. In June 1993, Intel had two manufacturers' boards working with its ISA bus test bed—not enough to build a full system, but

enough to show the technique worked. At the most recent Fall Comdex, Intel showed its plug and play system working—still with two manufacturers' configuration-aware boards. IBM's Micro Channel Plug 'n Play, by comparison, works with more than 1,000 existing boards, according to the Micro Channel Developers Association.

As an OS/2 user, this plug and play potential is a powerful argument for making an investment in Micro Channel architecture. Want another? An interesting technology demonstration offered by IBM at Comdex showed a DMA-driven printer driver working 50 percent faster on Micro Channel than on ISA. That's because DMA allows I/O to take place without tying up the main processor. Since OS/2 is designed for concurrent activities, it can take advantage of the idle time during I/O to do useful work. This is not the case with DOS or Windows, which sit and spin their wheels waiting for an I/O operation to complete.

Shakers and movers

IBM scored a substantial marketing success at Comdex with its presentation of OS/2 2.1 and the rollout of OS/2 for Windows. Now, however, Big Blue faces the challenge of maintaining that momentum in the face of senior management changes at IBM's Personal Software Products.

In the three weeks following the start of Comdex, John Patrick departed as PSP's vice president of marketing. Bill Rich, who in April was brought in to revitalize the marketing of OS/2, has now been moved out of direct marketing responsibilities and is being identified as general manager of operations. Inheriting the marketing portfolio is Dan Lautenbach, who becomes assistant general manager of marketing for worldwide sales and marketing. Lautenbach formerly was general manager of product marketing in the Midwestern Region for IBM's marketing and services organization.

The Q1 marketing plans for OS/2 call for a continued push to get OS/2 for Windows onto the desktops of both power users and small to medium-sized businesses, as well as a four-tiered marketing approach that targets various categories of corporate customers and the small office/home office market sector. However, that plan must now be sold to a new team—with the clock ticking, and Chicago marching ever nearer to release. ◆

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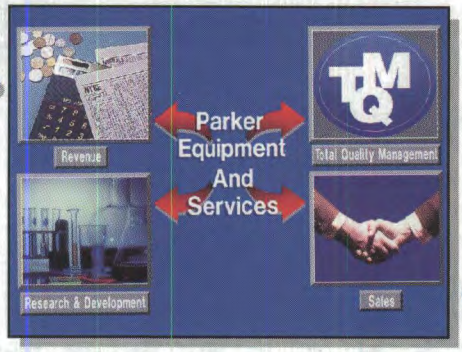

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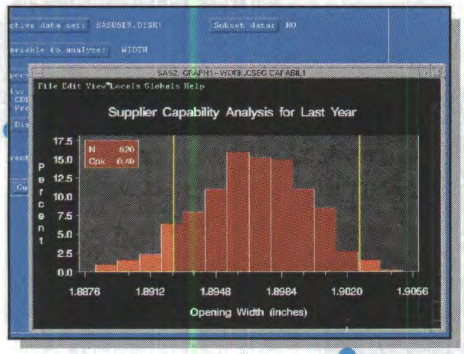

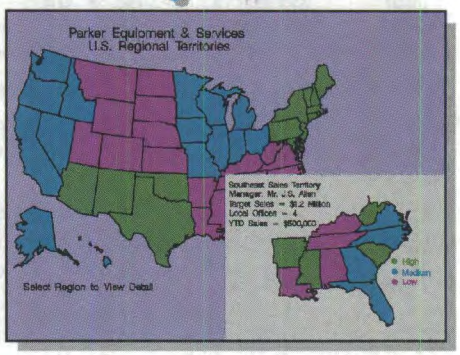

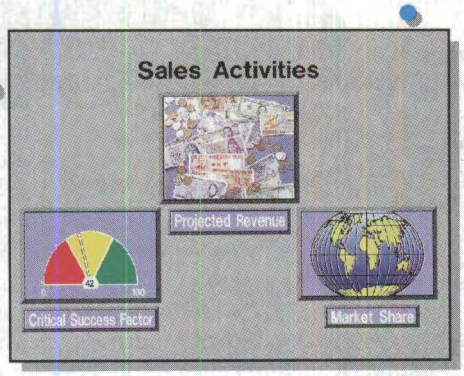

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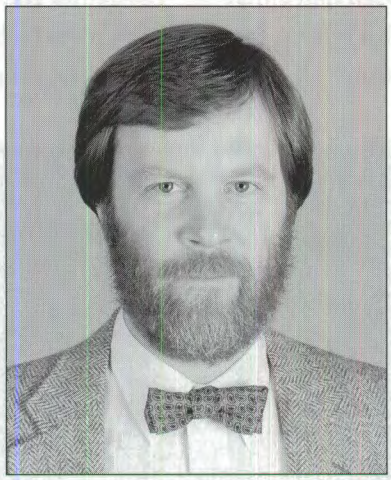
OS/2, Intel, and the Power PC

OS/2's detractors have sought to exploit confusion about IBM's RISC-based PowerPC chip family in an effort to spread fear, uncertainty, and doubt about OS/2 and its future.

In fact, however, there is no conflict between possible success for PowerPC and OS/2. To the contrary, the PowerPC is a key reason why OS/2 is a good strategic choice for users, and also a major incentive for software developers to target OS/2's 32-bit API and Workplace Shell GUI instead of competitive alternatives. Let's see why.

Initially, IBM will offer two operating system alternatives for PowerPC-based systems, while several others will come from other vendors. The first PowerPC systems, appearing as low-end additions to IBM's RS/6000 product family, run that line's OS, AIX. Later this year, mass-market PowerPC systems from IBM's Power Personal Systems Division will also appear with a new version of AIX, probably called Personal AIX or P-AIX.



IBM's best chance for broad market success with PowerPC systems, however, is not AIX but IBM's new Workplace OS. It is Workplace OS and its DOS, Windows, and OS/2 "personality modules" that will make PowerPC a potential upgrade path for present users of IBM and compatible desktop systems running DOS, DOS and Windows, or OS/2.

Apple, though nominally committed to PowerOpen, will apparently make its own System 7 (or 8) its primary offering on Apple's PowerPC-based systems. This is likely to be the preferred alternative for most who are upgrading from Motorola 68K-based Macintosh systems.

Microsoft's Windows NT operating system will also be made available for PowerPC-based systems. So, too, will other third-party alternatives such as Sunsoft's Solaris.

The AIX option will provide a reasonable downward migration path for current AIX (or Unix) users. The Apple PowerPC systems will undoubtedly provide an attractive upward migration path for users of Motorola 68K-based Apple Macintosh systems. Neither, however, is likely to attract large numbers of IBM and compatible users presently running DOS or DOS and Windows. The reason is the same as the reason why neither has done so already: lack of upward compatibility.

Users will not convert to another operating system (or environment) in large numbers, no matter how attractive it is, unless they can take with them the applications software and ways of doing things that they're used to. The failure of NeXT's heroic efforts shows that clearly. So did the inability of either Windows or OS/2 to gain broad acceptance until each finally was able to run existing DOS or DOS and Windows applications decently.

For the same reason, Windows NT on PowerPC won't gain many converts among users of IBM and compatible Intel-based systems. NT is already somewhat handicapped by the fact that it doesn't do as good of a job as OS/2 does in running 16-bit DOS and Windows applications. NT on PowerPC (as on any other RISC processor) will do that even less well than it does on Intel-based systems.

If NT on PowerPC is ever to amount to anything, it will first need to succeed on Intel (or other RISC) platforms and to develop a critical mass of robust Win32 applications that then can be transferred to a PowerPC version. Now that NT has shipped, however, prospects for this look far dimmer than they did before. NT's distinctly underwhelming debut seems to have dampened the enthusiasm of independent software vendors for Win32 development. With the promise of Chicago as a viable platform for Win32 applications still well over the horizon, that won't change any time soon.

So, if IBM's PowerPC is going to take a big bite out of Intel's market share on the desktop, it is almost certainly going to have to do it by way of Workplace OS—an operating system that is no enemy of OS/2's.

WOS is, in fact, what amounts to "portable OS/2." It will provide both the means to migrate 32-bit OS/2 applications to Pow-

erPC, and, by way of its DOS, Windows, and OS/2 "personality modules," the ability to run 16-bit legacy applications as well. And the Workplace OS graphical user interface, based on OS/2's Workplace Shell, will provide a common "look and feel" for users across OS/2 2.x on Intel architecture systems and Workplace OS on PowerPC-based systems.

Workplace OS will not replace OS/2 2.x on Intel architecture IBM and compatible systems any time soon. For them, OS/2 2.x will long remain the more efficient, more flexible, and more upwardly compatible option, perhaps for as long as Intel architecture systems retain substantial market share.

Workplace OS will, however, extend OS/2's reach to PowerPC systems. The shared GUI and 32-bit API mean that apps developed for one platform should readily run on the other with little more than a simple recompile.

Thus, not only users but software developers and even IBM itself are assured of a viable platform for 32-bit OS/2 applications regardless of whether or not the PowerPC's challenge to the Intel architecture's hegemony on the desktop is successful.

In fact, it is unlikely that either PowerPC will fail entirely or that it will replace Intel architecture systems over the next few years. In late 1995, Intel x86-based IBM and compatible systems probably will still be the most widely used platforms, even though PowerPC systems may have achieved significant minority market share by then.

By late '95, though, I expect that OS/2 2.x will be in use on at least a quarter of all of Intel-architecture systems (probably more) and that Workplace OS will prove to be the dominant operating system on IBM-labeled PowerPC systems. (The majority of non-IBM PowerPC systems will probably be from Apple, running Apple's System 7 follow-on for PowerPC.)

The bottom line is that PowerPC and Workplace OS will not harm OS/2 and its prospects. On the contrary, both chip and OS complement it, and both confirm the importance and the long-term viability of OS/2 2.x on Intel platforms as a key operating system for years to come. Rightly understood, both provide good reasons to build applications to OS/2 2.x's 32-bit API and the Workplace Shell GUI, and not reasons to avoid them. ◆

Q & A

A straight-talk interview on topics of professional concern

A conversation with

MICHAEL COWPLAND

The future success of OS/2 in the marketplace is, in one sense, a tale of applications. One application category that for IS managers has been almost the exclusive domain of the Macintosh platform, art and graphic design, is now showing up more and more in the PC environment. To find out where this market sector is going, *OS/2 Professional* Editor-in-Chief Edwin Black in early November spoke with Michael Cowpland, chairman, president, and CEO of Corel Corp. An edited transcript follows:

Edwin Black: The current version of CorelDRAW for OS/2 is 2.5. You are skipping 4.0, so the next release is when?

Michael Cowpland: It is 5.0. We expect it to be coming out about three months after the release of the Windows 5.0 version, that should be around next August.

Tell us why you skipped 4.0.

Because it's all 32 bit-code in the 5.0 and therefore it will be really easy to port over.

As I understand it, there will only be a 25 percent difference in code from one platform to the next. Correct?

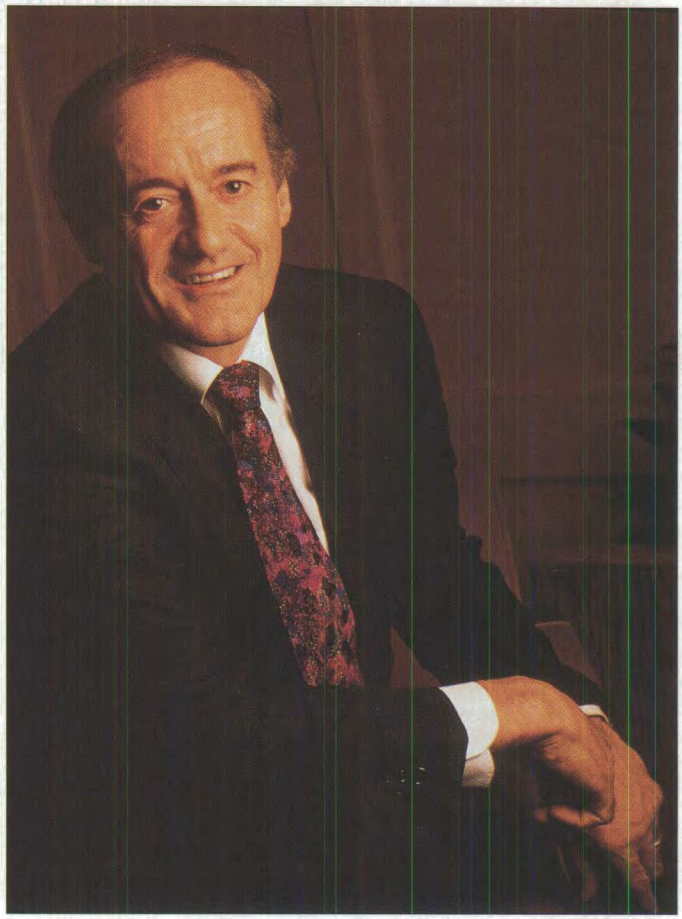
Yes. And that makes it much more cost-effective from a development standpoint.

As CEO of a major software company, how do you view the two platforms?

OS/2 went through a bit of a lull, but it's really picking up momentum now. So I think we see OS/2 having good prospects from here forward. The porting is getting easier because of the fact that more tools are available and more APIs can be transferred without any trouble.

Tell us about CorelSCSI.

We're increasing the power of SCSI II to include all the scanner drivers and many of the things that were originally on the professional version. The new price will be $129. And then we're also going to be bundling it in tape backup software so it will be quite a powerful offering.



I am told that this product will connect a CD-ROM user to everything.

That's right. Basically, the idea is that if you have a SCSI card, you'll be able to use virtually any SCSI device on the single card; you won't have to have a separate card for each device the way it has been up until now—in fact, seven devices on a single card. So, for example, you might already have an adapter card driving an

optical device; you'll be able to snap your CD-ROM directly onto that or a scanner without having to put a new card in the computer.

And the product will support OS/2?

Oh, yes.

You recently purchased Ventura. Are there any plans to port Ventura into OS/2?

Yes, it will be part of CorelDRAW 5. We're merging Ventura and CorelDRAW together into a single product for OS/2 and it will be shipping in May.

WE'RE MERGING VENTURA AND CORELDRAW TOGETHER INTO A SINGLE PRODUCT FOR OS/2 AND IT WILL BE SHIPPING IN MAY.

You are merging Ventura and CorelDRAW into a graphics suite. Lotus has created the multi-talented SmartSuite. Borland has teamed up with WordPerfect to create an office suite. Minor drawing capabilities are now coming into all sorts of word processing and spreadsheet programs. Five years from now, is the industry moving toward monster applications and suites?

No. But we see ourselves as being able to provide powerful integrated publishing tools. After all, it does simplify things for users to have one powerful color separation/color management system to run across Photopaint, Ventura, and CorelDRAW and to not have to do it different ways depending on which application you're in. That applies to either the text or graphics. We can render a printer's imposition and include all the fonts. In short, Corel provides all the tools necessary to produce really good quality color publications of either a long or short nature. And yes, we think that because of customer demand, the need for that type of comprehensive package will continue for many more years to come.

Where do you see yourself vis à vis PageMaker and Quark?

Regaining the lead very rapidly from PageMaker and Quark. Historically, Ventura was the leading package on the PC platform, and we think that with the initiatives we've made we'll be rapidly gaining back the number one spot.

When do you think?

It could happen right away because we've lowered the price of Ventura 4.2 to only $249, including three CD-ROMS packed full of fonts, clip art, and other utilities as well as the powerful Ventura Publisher, and more. Add it all up and it is several thousand dollars worth of goodies—all for $249. Early indications are that the volume should be huge. All of the competing packages are right around $895 without anything like the same kind of power.

Quark admittedly does a terrible job of public relations; Corel does a much better job. But Quark still has a very sophisticated package. After you come out with your combined product and its various enhancements, there still will be many things that Quark can do that CorelDRAW/Ventura cannot do.

Very, very few.

Would we be able to produce *OS/2 Professional* on CorelDRAW in the way we currently do with Quark?

I would say that when you look at the 5.0 version, you'll be able to do it better because it will have a lot more power. On the 4.2 version there are certainly a few things that wouldn't be quite as effective for you, but on the other hand we have things they don't. For example, if you want to do an electronic version of *OS/2 Professional*, like *PC Magazine* recently did, hypertext links are automatically generated with Corel/Ventura to provide easy navigation through the document.

Let me put you on the hot seat now. You currently are working in both communities—the NT Windows community and the OS/2 community. What is the difference between the support you receive from Microsoft and the support you receive from IBM?

At this point in time, IBM and Microsoft are about equal. Microsoft has always been really good. IBM went through a period, when they were being reorganized, when it wasn't so good. But I'd say currently they're extremely responsive.

When do you believe was IBM's unresponsive period?

About a year ago it seemed to me that they were hard to get feedback from, hard to get things changed. But, as I say, we currently find them very responsive.

Who at IBM do you find most helpful?

The software group. John Soyring and his people. We're really

pleased about the things they are putting in place.

What kind of confidence does the work of John Soyring and others give you in the OS/2 marketplace?

Very good confidence. And I think the shipment of the $50 version for Windows—Ferengi—will stimulate that tremendously. CorelDRAW for Windows 4 will run 12 percent faster in Ferengi than it does in DOS.

Is that for both OS/2 2.1 and Ferengi—the two actually are virtually indistinguishable?

Yes, same thing. Except the nice thing about Ferengi is that it's less expensive for people to buy. It's going to stimulate things a lot.

Are we going to see Corel developing some applications for PDAs?

We're watching them carefully. Currently we don't see a direct fit but that could change as things move forward.

If you did decide to develop a PDA application, how long would it take to bring to market?

We move really fast, so it wouldn't take us that long. Probably about eight months.

Let me put you in the hot seat a second time and speak directly to the industries that you serve, and of course *OS/2 Professional* is part of one of those industries—publishing. The incredible advances that programs such as CorelDRAW, Ventura, Quark, and PageMaker provide, what does that do to the human job market for designers, artists, typesetters, color engravers, pre-plate workers?

It stimulates the job market because we're finding now that more people are getting into color publishing. Low-cost color publishing is now available and people need programs like ours to be able to handle the task. I think individuals are getting more and more comfortable with doing their own typesetting and with the use of graphics. And now they are prepared to put bitmaps into these kinds of applications as well. That's also why we've introduced our photo titles where we now have 100 photo CDs available, each of which has 100 photos on them, and they can be used in either Ventura, CorelDRAW, or other desktop publishing applications.

Again, what does this do to the people who are in the color separation and typesetting business?

It increases their business because what happens now is that more and more people will be trying it themselves. Yet they will be running into difficulties on the trickier tasks. So while they will be able to do their run-of-the-mill publications, if they want to push the envelope, they'll be going to the color separators. The general market for color will get much higher because the acceptable level of a publication is going to be raised to include color and thereby their overall business should expand.

So you're enabling people to utilize color who never had it at their disposal?

Yes. And therefore they'll get to a certain level on their own equipment. But the higher you go, you increase the demand of that superior level as well.

Well, I can tell you for a fact that *OS/2 Professional* is no longer using color separators or type houses.

Yes, but on the other hand you're on a more sophisticated level than people who are doing brochures and so on. They'd do some of it themselves. But if they have some particularly tough file, they're going to have to go to the color separator.

A new problem for the corporate graphics department that sophisticated programs such as CorelDRAW are creating is the duty for the corporate designer to not only be a creative person, but to be a highly technical person as well. Will companies see themselves hiring two different people now, a designer and what is being called an operator?

No, I think your first statement is the case. Companies will want the creative designer to acquire technical skills. That way they'll be able to magnify and build their talents by using these tools.

But that means the creative designer who used to spend all of his or her time being creative now must be a technician as well?

No, but these programs provide an attractive capability that designers didn't have before. Now they can become even more creative. It's like giving power tools to someone who is used to hand tools.

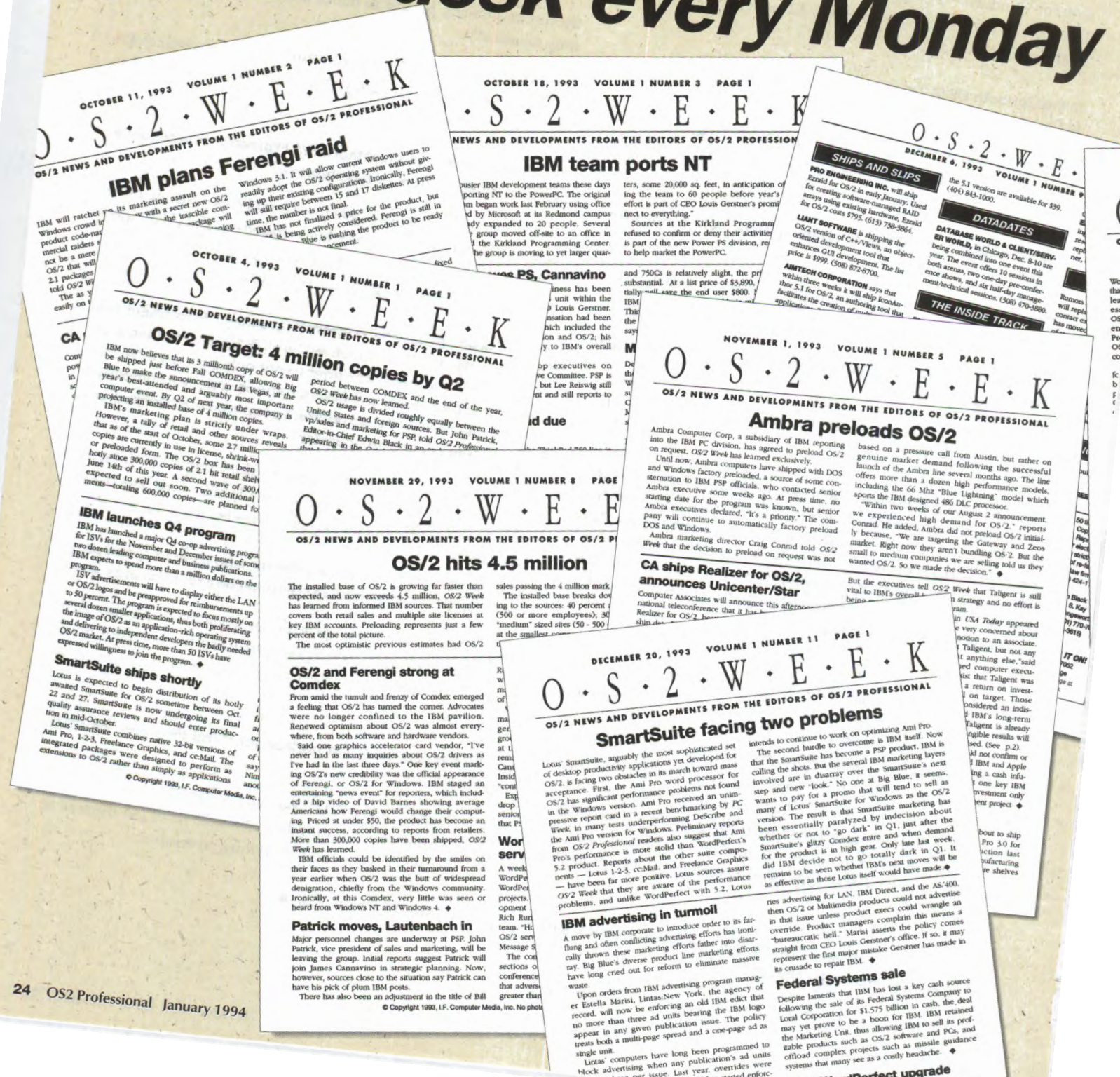
And what else is on the horizon for Corel involving the OS/2 platform?

Basically, it's CorelDRAW, our sort of flagship product. That's the nice thing about our products: because we've put them all in one, the OS/2 users will get everything in one box.

Thank you, Mr. Cowpland. ◆

Read it here

On your desk every Monday



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OS/2 NEWS AND DEVELOPMENTS FROM THE EDITORS OF OS/2 PROFESSIONAL

IBM plans Ferengi raid

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NEWS AND DEVELOPMENTS FROM THE EDITORS OF OS/2 PROFESSION

IBM team ports NT

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OS/2 NEWS AND DEVELOPMENTS FROM THE EDITORS OF OS/2 PROFESSIONAL

OS/2 Target: 4 million copies by Q2

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Ambra preloads OS/2

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OS/2 NEWS AND DEVELOPMENTS FROM THE EDITORS OF OS/2 PROFESSIONAL

SmartSuite facing two problems

first.
morning.

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/2 NEWS AND DEVELOPMENTS FROM THE EDITORS OF OS/2 PROFESSIONAL

WordPerfect redirects OS/2 strategy

Perfect Corporation will announce on Monday it is redefining its OS/2 strategy, *OS/2 Week* has ned. WordPerfect 6.0 for OS/2—which is now ntially complete—will not be released. The 2 products development stops with a December ancement of 5.2. OS/2 development for sentation has also been halted. The company's /2 development for office server and gate-ways timines. Development for NT is also going forward. WordPerfect was in a tough horserace with Lotus r command of OS/2 loyalties. WordPerfect 5.2, a 16- t port that the company positioned as an interim roduct, suffered from performance problems. oncerns about Wordperfect 6.0 only heightened the xpected strong showing of Lotus's SmartSuite. Company strategists told *OS/2 Week* that the projected eturn on investment "just wasn't there."

In a letter to customers, a final draft of which was obtained by *OS/2 Professional*, WordPerfect president and CEO Alan Ashton explained "WordPerfect's OS/2 developers have been reassigned to integrate WordPerfect's Windows products with OS/2 Workplace Shell." Company sources indicate the 6.0 version will operate with some drag-and-drop features under Win-OS/2. As such, the company seems positioned to prepare for Microsoft's Chicago.

Ashton's letter asserts that the company "will accommodate users who wish to make a transition from WordPerfect 6.0 for Windows and DOS." The letter underwent long debates and revisions to cast the best possible light on the decision. WordPerfect wants to maintain its multi-layered relationship with IBM, refocusing on Big Blue's cross-platform development. Several IBM PSP officials, including president Lee Reiswig, traveled to WordPerfect's Orem, Utah, headquarters to consult during the decision-making process. But the decision to leave OS/2 did not change.

WordPerfect's brief campaign will be remembered for the constant enthusiasm and support shown by WordPerfect staffers Rich Running and Troy Monney, both of whom attended numerous user group sessions and OS/2 meetings promoting 5.2.

The departure of WordPerfect leaves DeScribe and Lotus's Ami Pro to divide the native OS/2 marketplace.◆

Lotus and IBM News

At press time, Lotus and IBM attorneys are working feverishly to tie up loose ends on what informed sources described as "special news." The attorneys are attempting to finalize documents in time for a 3PM Monday announcement at Comdex, which is expected to include PSP president Lee Reiswig and senior official of Lotus. Lotus is currently scoring kudos for its impressive SmartSuite. ◆

Ferengi beats announcement

A mere 20 minutes after OS/2 2.1 for Windows (aka Ferengi) [illegible] delivered to Minneapolis-area Egghead stores, [illegible] copy. Indeed, Californ[illegible] before. Version didn't [illegible] ment. [illegible] annou[illegible] Int[illegible] for W[illegible]

does not include Win-OS/2 (the custom-tailored variant of Windows 3.1 for OS/2 2.1). Instead, the system uses an existing copy of Microsoft Windows 3.1 that resides on the target machine. As a result, installation requires 6 fewer diskettes (notably, the same number of diskettes used by Windows itself). ◆

OS/2 Professional Announces Second Interchange

OS/2 Professional has announced the Second Annual OS/2 Professional Interchange in Palm Springs, California, on October 2-5, 1994. Surveys of some 800 participants at the first show yielded very high marks. At the closing session, registrants shouted their desire [illegible] second conference. The Desert Springs Marriott

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PS

begin in January 1994. The 80mhz 601 will sell at a unit price of $490 in volume lots. (914) 892-5389.

THE INSIDE TRACK

OS/2 PROFESSIONAL's subscription reconfirmation drive continues to record high numbers. Last month, the magazine asked approximately 155,000 of its 200,000 mostly controlled readers to reconfirm their subscriptions in writing. In only 21 mail days, 57,680 reconfirmation cards have been received thus far. The magazine estimates some 45,000 cards will ultimately be received off the single mailing.

DIGITAL EQUIPMENT CORPORATION has now unveiled LinkWorks, its bid for a share of the nascent groupware market. LinkWorks is object-oriented, allowing applications or specific documents to be manipulated as icons, and designed to allow collaborative work that matches departmental and line-of-business patterns. The initial release of LinkWorks will support Macintosh, Microsoft Windows and Motif client workstations and OSF/1 AXP, Ultrix and SCO Unix servers.

Where's OS/2, you ask. Coming soon, according to Bill Carlyle, the marketing manager for Digital's groupware products. Carlyle notes that the OS/2 platform is of particular importance in the banking and insurance markets, which DEC is determined to penetrate. But bear in mind that "soon" is a relative term—expect LinkWorks for OS/2 Presentation Manager [illegible] sooner than next summer.

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OS/2 NEWS AND DEVELOPMENTS FROM THE EDITORS OF OS/2 PROFESSIONAL

PSP Gets SmartSuite

The recently announced deal between IBM and Lotus to market the SmartSuite for OS/2, first predicted in *OS/2 Week*, is more far-reaching than a simple co-op or retail assistance program. *OS/2 Week* has learned exclusively: PSP has now essentially taken over the product, appointing its own product manager, Bella Gong. Questions about advertising, marketing, box design, and even Lotus and IBM logos are only now being addressed. At press time, there is still debate over whether the SmartSuite will continue to have that same "Lotus look" or have an entirely new IBM-driven look. IBM officials worry their efforts will support the Windows version as well. Hence, a whole new package and campaign is being considered.

The SmartSuite has been immensely successful, already selling out of the first 7,300 copies shipped after Comdex. Now, however, channel resupply issues are complicated by unsettled product identity questions. The reason IBM took over the product probably has less to do with the product's success than with monies Lotus owes IBM. And some observers are beginning to wonder if the SmartSuite arrangement might not become the model for marketing other OS/2-compatible software. By this thinking, IBM would take over the marketing of more and more of the applications it nurtured, it then would market them along with OS/2 in the corporate marketplace, where Big Blue's field force is still a force to be reckoned with. ◆

OS/2 Peer Networking Ready Soon

IBM is moving closer to commercial production of its peer networking version of OS/2, according to well-placed company sources who spoke to *OS/2 Week*.

The product, which has been in limited beta testing for the past month or so, reportedly includes applications that enable peer networking through the existing NTS/2 layers (the technology used in LAN Server). IBM has been reluctant to release a product based on this technology because of the data security inherent in peer networking [illegible]

the software labs in Boca Raton. Knowledgeable observers report that those improvements will include reliability with only 4-8 MB of RAM instead of the 8-12 currently required; new security hooks, allowing third-party software developers to produce security tools for the OS/2 environment; new mouse and screen pointer software technology to make screen navigation easier; a Win32S API; asynchronous input queues; and DSOM availability for [illegible] processors (but not [illegible]

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SPECIAL REPORT

the future

LAST YEAR WAS A TUMULTUOUS ONE FOR OS/2. WHAT DOES

BY RICH MALLOY, EDWIN BLACK, AND BRADLEY D. KLIEWER

In the past year, corporate America has seen not one or two but three major new operating system options released by IBM and Microsoft. And when it comes to microcomputer operating systems, we already know that the past is in fact merely prologue: We are scheduled to see at least two additional releases in the near future, with more likely soon thereafter.

As if that weren't enough, we'll also see code give way to objects, and RISC chips move down-market to do battle with Intel architecture chips. How are we to plan for the future?

The Past in Perspective

Before we jump ahead, though, let's impose something of an orderly framework on the tumultuous past.

OS/2, like Windows, had a less than glorious start. For years it wallowed in a dumpster full of unkept promises. Then, with version 2.0 in April 1992, OS/2 was reborn. The new version was an instant success, selling a million copies in a few months. But the product was buggy, and customers who had been tantalized by a working vision of 32-bit functionality on the desktop began waiting for a new, more fully realized version.

And wait they did. The new OS/2 version 2.1 was to be the first major new operating system of 1993, scheduled for a January release. Then for March. Then May. The new version finally appeared on June 14th.

A few months afterwards, we saw the official release of the second major operating system of 1993, the long-awaited and heavily promoted Microsoft Windows NT. During more than a year of intense marketing, it was often compared with OS/2. But following its release, the new operating system proved to be a much different animal, requiring a high-octane diet of RAM, disk space, and processor cycles.

Late last year we saw the third major variation on an operating system theme when IBM scored what in the context of Big Blue's recent history was a surprisingly brilliant coup.

Faced with the expiration of its licensing deal with Microsoft for Windows, IBM turned what could have been a crippling dilemma into a feature. With the new OS/2 for Windows (word of which first surfaced a month in advance in the *OS/2 Week* newsletter under the code name *Ferengi*), IBM actually made its desktop OS product more attractive by stripping away some of its features. Since many new systems are now preloaded with Windows 3.1, the Windows compatibility code was superfluous anyway. By jettisoning its complex and highly optimized WIN-OS/2 code, IBM simplifies OS/2's leviathan installation process. Emancipated from the licensing fee it had to pay to Microsoft, IBM can also lower its prices.

With OS/2 for Windows, IBM forged a win/win solution. For users there is now a simple, relatively painless upgrade path to OS/2. They no longer need replace Windows and their desktop working environment; instead, they just put it on a more stable and powerful foundation. Meanwhile, IBM at last has a reasonable product it can offer system manufacturers for preloading. Previously, OEMs who wanted to preload Windows and OS/2 had to buy what in effect were two licenses for Windows—one from Microsoft directly and the other through IBM's OS/2 license with Microsoft.

With its Windows license now history, IBM can now offer manufacturers very reasonable terms. Big Blue can, in effect, buy market share by trimming its terms to the bone. Later it can make up the difference in user upgrades.

Microsoft has garnered tremendous success by preloading Windows. In many ways, the future of OS/2 will depend on IBM's ability to do likewise.

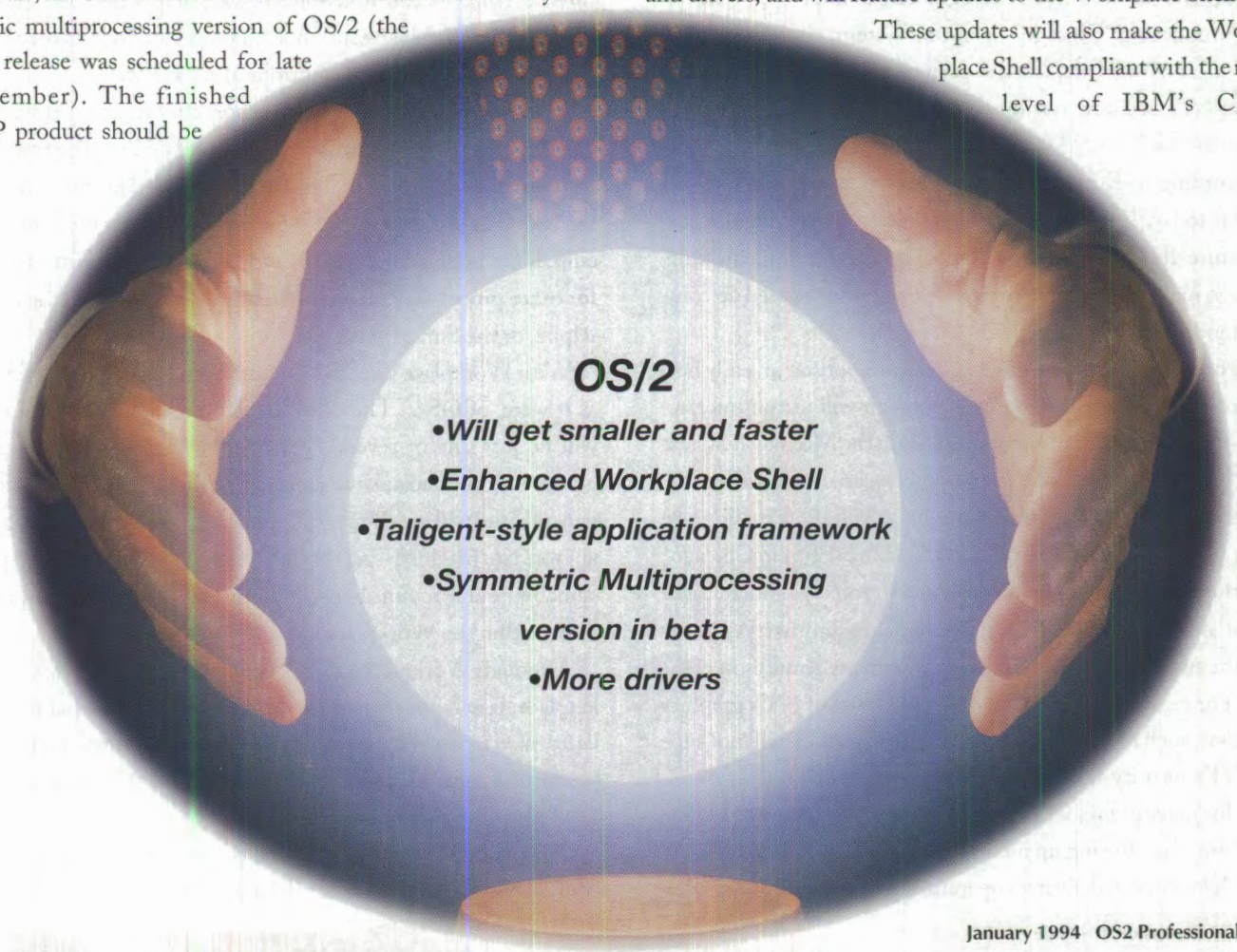
# of OS/2

IBM'S DESKTOP OPERATING SYSTEM FACE IN 1994?

A Multiprocessor Version

Probably the first upgrade of OS/2 to appear this year will be one that has been long promised. One of the key strengths of Windows NT—and a sore spot for OS/2 so far—is support for multiprocessing systems. As systems that feature multiple Pentium processors appear, this will become an increasingly important advantage for NT. But that should change soon. By the time you read this, IBM should have made available a beta version of a symmetric multiprocessing version of OS/2 (the beta release was scheduled for late December). The finished SMP product should be available by the middle of this year.

For the vast majority of us who have only one processor in our systems, IBM also plans a number of improvements for the future. According to Laura Sanders, product manager for OS/2, future enhancements include better performance, broader device support, and better overall usability. Functionally, OS/2 will be easier to install, have a general installation program for applications and drivers, and will feature updates to the Workplace Shell. These updates will also make the Workplace Shell compliant with the next level of IBM's CUA



specification for user interfaces, which provides common cross-platform menu and function key conventions. This latter is a matter of more than passing concern to IS managers seeking to wrestle some user interface consistency out of a multi-platform computing environment. IBM will also be working with its partners in the COSE alliance on further refinements.

IBM will not say when these new enhancements will appear, but independent consultant Michael Kogan predicts that a new version 2.2 could appear in the third quarter of this year. Late last year, IBM sources told *OS/2 Week* that version 2.2 will debut in Las Vegas at Fall Comdex, and then advanced that date to the middle of this year. Kogan also says the new version will include security frameworks and will have asynch input queue management. Unfortunately for enterprise environments, though, there's no word yet on client/server network support in future versions of the OS. A peer-to-peer version, however, is in the works.

Chicago

OS/2 will not be the only operating system to improve. Microsoft will introduce its "Chicago" operating system, also called Windows 4.0 and "NT Lite," soon—perhaps sometime late this year. Unlike NT, this new version will be a much more direct competitor to OS/2.

According to Kogan, "Chicago is a validation of everything OS/2 is today." Like OS/2, the new version of Windows is said to feature full 32-bit support and preemptive multitasking. Chicago may also include free networking and a spruced up combination Program Manager/File Manager.

According to *PC Week*, which based its report on an early beta copy of Chicago, the new operating system will use an interface that borrows heavily from not only OS/2 but the Macintosh System 7 and NextStep as well. For example, although details will probably change by the time the software ships, Microsoft is said to be trying to support long filenames (*à la* OS/2's HPFS) in Chicago.

Although Chicago is being designed to run on a much leaner diet of system resources than its system-hog brother Windows NT, the two operating systems will have many features in common. For example, Chicago will support most of NT's graphics additions, such as Bezier curves. Chicago, however, will not support NT's security and event-logging.

As for networking, Chicago will use a 32-bit protected mode redirector, thus freeing up memory for DOS sessions.

If Microsoft can deliver an operating system that lives up to all of this advance word, then it will have a very strong competitor to OS/2. But as we have seen with NT, that could be a big "if." The new operating system has been slipping regularly, and may not be available until very late this year—if then. Meanwhile, OS/2 will probably boost its installed base to nearly nine million copies.

RISCy Alternative: "Workplace OS"

One of the most important versions of OS/2 will solve two problems for IBM: the need to provide a top-notch operating system for the slew of potent low-priced PowerPC RISC systems it expects to ship, and the challenge posed by the cross-platform portability of Microsoft's Windows NT. The solution to both issues is in the works, bearing the code name "Workplace OS."

Workplace OS will feature an interesting IBM modification of the Mach 3.0 Unix kernel developed by Carnegie-Mellon University. This kernel has been stripped of all except the most basic functions such as interprocess communication, ports, and threads. Unix-specific functions such as file I/O have been moved to a higher layer. Meanwhile, machine-specific code has been relegated to a thin layer at the bottom of the kernel.

To port this OS to a new processor, only this thin machine-specific layer needs to be modified. Thus, IBM is freed from the restrictions of the Intel architecture—or any other, for that matter. IBM has probably already written a version for the PowerPC chip. If the opportunity presents itself, it can easily write versions for other processors, such as the HP PA architecture, the DEC Alpha, or the Sun SPARC chip.

With Workplace OS, IBM is also freed from the restrictions, as it were, of OS/2. The OS/2 operating system as we know it will be just one of several "personalities," or application programming interfaces, sitting on top of the Mach kernel. Other personalities will be Motif, AIX, and Macintosh. By choosing the appropriate machine-specific code and personality, you will presumably be able to run almost any application on almost any platform within the Workplace OS environment.

Although Workplace OS will be important in the RISC marketplace, it will not replace the Intel-specific OS/2 that most of us are now using. The reason, says consultant Kogan, is that the platform-independent version will never have the speed of the Intel-optimized version.

The value of Workplace OS will be the portability it instantly confers: With the new OS available, OS/2 software developers

will be able to port their applications directly to RISC platforms, either by recompiling their software or by running it on an Intel emulator on the RISC processor.

Even with a powerful, low-priced processor such as the PowerPC, though, it is hard to imagine the Intel installed base dwindling significantly. But it is a sure thing that IBM and Apple will sell large numbers of PowerPC systems, all of which can be viewed as potential OS/2 sites.

Taligent, the Technology

The big question mark in the long-term future is Taligent. From Day One, Taligent has been the most unlikely of corporate creatures: an alliance between two fierce competitors, IBM and Apple Computer. The plan was to combine IBM's RISC expertise with Apple's new "Pink" object-oriented approach to create a new operating system to run on PowerPC systems.

At one time, Taligent planned to release its operating system in the mid-'90s in one fell swoop. But the companies that would be its customers have expressed concerns about moving users to yet another new operating system. In response, Taligent has now decided to take a more gradual approach. As it moves closer in its development process to a full operating system, it will license components of its object technology to IBM and Apple—and to anybody else who is interested. IBM and Apple will quickly incorporate this technology in OS/2 and System 7, respectively.

Part of this process is already happening. Application frameworks are standardized ways of creating applications using instructions contained in an application programming interface. They are, in effect, a layer above the API. Some Taligent-ready application frameworks should be available by the end of this year. IBM claims that software developers who write to these frameworks will be able to transport their applications easily to future operating systems. This is essentially a carrot for software developers to get more OS/2 software: Write your apps for OS/2 with these application frameworks, says IBM, and you'll instantly be ready for Taligent when it appears.

In the future, we'll see more and more Taligent features in OS/2. Workplace OS will likewise benefit, having available the option of a Taligent personality. But the benefits of a full object-oriented operating system will have to wait until Taligent itself becomes available.

For example, with Taligent, users and developers will be able to access the operating system's lower-level device drivers to improve them. Thus, if a printer manufacturer comes out with a new version of a laser printer, it does not have to write a whole new driver; instead, it can simply take a standard laser printer driver and create a customized descendant of that driver that would not only support the special features of the new printer, but also inherit all the features of the original driver. And here's the best part: If later on someone were to modify that standard laser printer driver to support, say, a new foreign language, then all descendants of that driver—including the driver for the new printer—will automatically support the new language as well.

We know from the histories of other operating system strategies, however, that the specifications set forth on paper can look better than the final implementation. If and when Taligent appears, many of its features will already have worked their way into OS/2, Workplace OS, and Apple's System 7.

As technology matures, the developments in computing will become more evolutionary rather than revolutionary. For Taligent to succeed, it must be made part of a transition—not only in terms of backward compatibility (as we've seen with OS/2), but also in terms of usability. The migration of OS/2-style operations across systems such as DOS and Windows keep prospects for such evolutionary change bright.

New Technologies

A very important future area for OS/2 is its support of new technologies. One of these is pen technology, which despite all of its coverage in the press has continued to evade popularity. The prob-

lem is that, except for certain narrow vertical application areas, keyboards are still many times more practical than today's handwriting recognition algorithms. Witness the fiasco that is the current version of the Apple Newton.

But the algorithms are improving, and in cases where keyboards are impractical—for example, any environment where users cannot sit down—pen computing could be very useful. IBM has already come out with a version of OS/2 for pens, but until user demand for pens picks up—which may take a long time—there will be little progress here.

An emerging area where IBM has committed huge resources and has attained a marked lead is speech recognition. Over the past year the company has demonstrated and released a number of speech-recognition products, including the very impressive Personal Dictation System for OS/2. IBM recently showed *OS/2 Professional* an amazing new speech-recognition technology that is speaker-independent and can recognize words spoken in a natural rhythm (that is, without...pauses...between...words). This technology could have a huge impact on the speech-recognition market. We'll have a detailed report in *OS/2 Professional* in March.

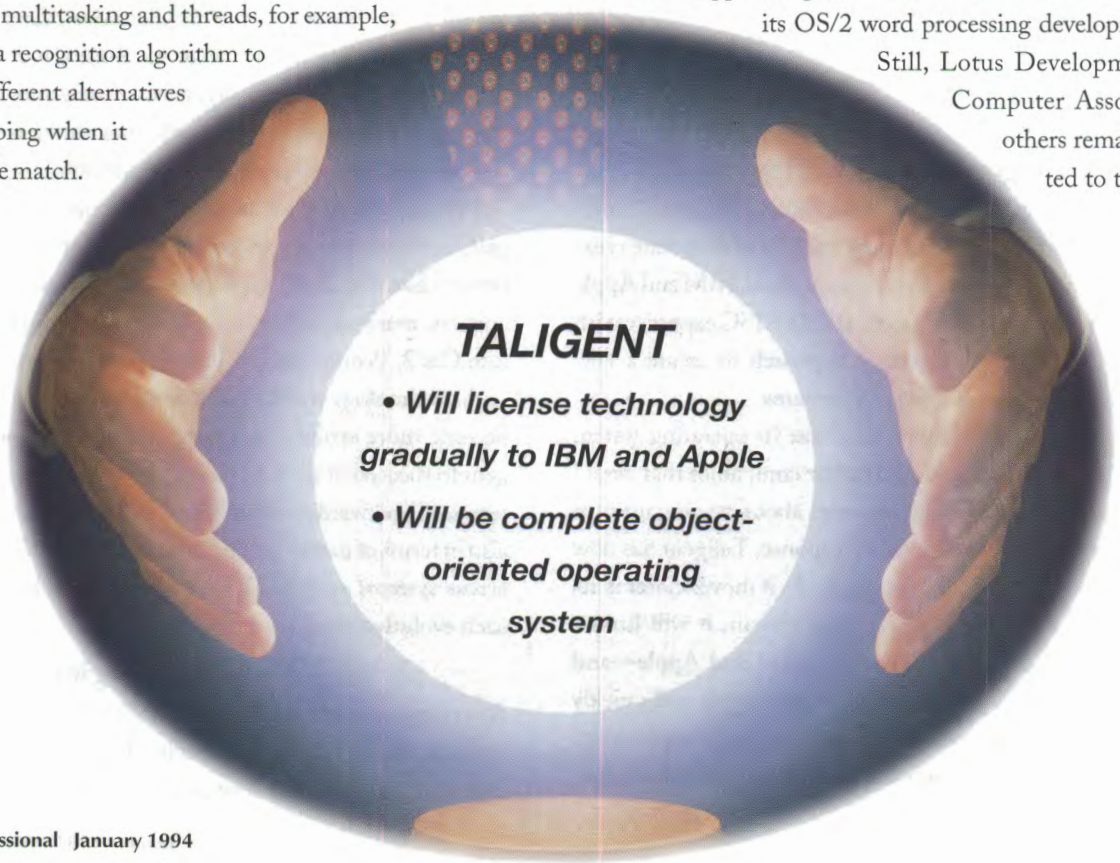
For both pen and speech recognition, OS/2 could become the platform of choice because of the power of its technology. With its support of multitasking and threads, for example, OS/2 allows a recognition algorithm to try several different alternatives at once, stopping when it finds a suitable match. OS/2 can also easily insulate this recognition processing from any other work the application or operating system is doing in the background.

Although weakened by declining revenues and a collapse in the mainframe market, IBM retains an important position as both a hardware and a software developer. The same integration between hardware and software—between chip and operating system—that is important for the development of peripheral technologies such as pen and voice is at the root of the company's power in the marketplace. The development of these capabilities thus stands as a metaphor for the company's future: If it can improve coordination between its internal groups, IBM has the strong multi-platform presence (in *all* categories: mainframes, minicomputers, workstations, and personal systems) to offer the best options for cross-platform integration.

Changes in Development Tools

Without applications, even the best new operating system would be useless. In some cases, the changes in applications are even more important than the changes in the operating systems themselves.

The biggest change in the applications marketplace last year was the disappointing news that WordPerfect was abandoning its OS/2 word processing development effort. Still, Lotus Development Corp., Computer Associates, and others remain committed to this growing



market. One hopeful sign is Corel's acquisition of Ventura Publisher and its commitment to bundle Ventura into CorelDRAW, providing a long-needed desktop publishing system for OS/2.

While Corel and Lotus are continuing their development, it now seems clear that the growth curve for OS/2 applications is far less steep than the growth curve for the operating system itself. With increasing maturity, market sectors will increasingly differentiate themselves, though, with application development and growth most evident in the corporate sector.

The success of OS/2 has never rested entirely on large canned software packages. Rather, a huge component of OS/2 software is custom-made. Thus, for OS/2 it is not so important what applications are available as what application development tools there are.

Likely the biggest change in this realm will be the arrival of IBM's Visual Programming Tool. This program, which is scheduled to be available in the first part of this year, will offer a powerful visual development tool.

Although IBM has limited experience in this area, it hopes to build on the successes of others, notably Microsoft's Visual Basic. Like Visual Basic, IBM's new program will use a drag-and-drop graphical programming style to allow relatively novice programmers (and perhaps even your average business manager) to build relatively sophisticated applications. But IBM claims that unlike Visual Basic, its VPT will require users to write little if any code, allowing them instead to take complete advantage of the object-oriented properties of OS/2.

In addition to IBM, several other companies, such as CA, Digitalk, and Watcom, will come out with visual development tools that take increasing advantage of OS/2's System Object Model. The end result will be a deluge of powerful custom software for OS/2.

Growth

By the time you read this, IBM will have sold almost five million copies of OS/2. True, that pales in comparison to the 40 million copies of Windows that Microsoft claims to have sold. But consider this: A large percentage of those Windows copies were sold not over the counter, in the traditional manner, but preloaded on systems. In contrast, up to now almost all OS/2 copies were actively bought, suggesting that OS/2 users likely are much more actively involved with their operating system. Also, as Kogan points out, every copy of OS/2 2.0 and 2.1 includes a Windows license, which Microsoft then counts in its total sales. Yes, Windows is a successful product. But it may not be quite the success its numbers indicate. More important, OS/2 is likely not the underdog it appears to be.

OS/2 appears to have hit the elbow in the growth curve. The current critical mass of users ensures that the system is viable and will continue to grow—perhaps explosively.

As a result, OS/2 is a market that DOS and Windows developers cannot afford to ignore. (The market for communications packages and backup software in particular will be strong.) While much FUD revolves around future developments in the Windows environment, that uncertainty works in IBM's favor. Just as DOS 3.3 established a stable design target for DOS applications (despite evolution through version 4.0., 5.x, and 6.x), Windows 3.1 presents a stable design target that works across multiple platforms: OS/2, Windows, and WABI (the Windows emulator for Unix systems). A transition to new Windows functions will proceed at a slow, steady pace—allowing time for alternate environments such as OS/2 and WABI to provide parallel features.

The new versions of OS/2 should have a strong influence on sales. The slimmed-down OS/2 for Windows with its under-$50 price will be a hot seller. With these sales, and the potential sales of preloaded OS/2, the installed base of OS/2 will probably double by the end of this year. Such a huge increase in the OS/2 market will have its own promotional effect in attracting more applications and thus, in an upward spiral, even more users.

OS/2 2.2 FEATURES

- Faster
- Needs less memory
- Easier installation
- Asynch input event manager
- Security frameworks
- Intro: 3rd Quarter

Beyond the Corporation

Most OS/2 users are in corporate environments—IBM's traditional area of strength. Two factors could force a change, however. One is movement towards high-powered systems in the SOHO (small office/home office) market. Unlike corporate offices, which are saddled with a legacy of inadequate AT systems and budget cutbacks that limit upgrading potential, a surprising number of small offices are opting for big-ticket number-crunchers that boast 66-MHz processors, eight or more megabytes of memory, a fax modem, and CD-ROM drives. Although these systems, if bought today, may well arrive preloaded with Windows, they are all set for OS/2, especially OS/2 for Windows. OS/2 is a natural for the SOHO power user who can afford to pump up one or two muscle machines with all the extras.

The other factor is that many users will opt to have the same system running at their office and their home. As memory prices fall back into line, more home users will beef up their home systems—and begin migrating OS/2 from the office to the home.

Long-Term Future

We've discussed new versions of OS/2, Workplace OS, and Taligent. But as we approach the end of the millennium, we need to keep an eye out for bigger changes. What will computing be like?

IBM sees big changes. According to Peter Hayes, director of communications for IBM's Personal Systems Products, "The next step is something that will make Windows and Windows brand environments very stale by comparison."

With technologies such as pen input, speech recognition, and object-oriented programming, says Hayes, the groundwork will have been laid for a whole new way of computing. "These will come together in a new user paradigm." According to Hayes, we'll finally be able to do those things that we've always expected to be able to do with our computers.

Is IBM's vision similar to the Knowledge Navigator proposed by Apple a few years ago? The Knowledge Navigator was Apple's futuristic vision of the computer of tomorrow: a laptop system with high-quality color graphics, speech synthesis and recognition, natural language processing, and wireless video conferencing, among other features. To use it you merely spoke to it. On the screen, the system would show you a full-motion video of a virtual assistant answering your questions. "That is a good thing to hold in your head," says Hayes.

With a change in management at Apple—and less emphasis on the futuristic visions of the company's former CEO, John Sculley—it would be quite ironic if IBM were now to fulfill this vision.

The Key: Competition

1993 answered a number of lingering questions from the past. With OS/2 2.1, IBM has shown that it can indeed produce a world-class operating system. With Windows NT, Microsoft has shown that it takes ambitious hardware to run an ambitious operating system. With OS/2 for Windows, IBM has shown how it is possible to com-pete with Windows. And with the PowerPC, IBM has put muscle behind an integrated hardware/software vision that works with the competition rather than locking users into proprietary systems.

Which operating system will dominate the '90s is no longer important. The more crucial question is: Which operating system will provide the most effective solution for your environment—now and in the future?

But there are new questions for 1994 and beyond. Which operating system will dominate the '90s is no longer important. The crucial question instead is: Which operating system will provide the most effective solution for your environment—now *and* in the foreseeable future? Based on the available evidence, the answer is most likely OS/2.

Another important question is whether IBM has the chutzpah to develop and market a successful operating system. The last two years have brought about many changes at Big Blue, most of them for the better. The company seems increasingly to be concerned about its customers rather than its internal bureaucracy. It is also getting more competitive. Recent moves such as the introduction of OS/2 for Windows suggest that the computer giant is abler than ever to compete in the operating system market. But it still has a ways to go to show that it can score a KO in the marketplace.

One thing is certain, however: With players like IBM and Microsoft, the competition will be fierce, and fascinating. And with competition like this, there is always one sure winner: the user. ◆

Windows Version of OS/2—a Solid Platform

BY BRADLEY D. KLIEWER

OS/2 Special Edition for Windows (*aka* Ferengi) certainly has benefited from Big Blue's newly rediscovered marketing prowess.

On the marketing front, OS/2 for Windows presents an almost no-risk buy for the individual user. Many a customer has paid more than the Special Edition's $50 introductory price for a DOS memory manager and multitasking system such as Quarterdeck's QEMM/DesqVIEW package. And if nothing else, OS/2 for Windows certainly excels as a DOS memory manager and multitasker. It comes as no surprise, then, that stores initially had trouble keeping enough stock on hand to fulfill customer demand.

But once the box is open and installed, will the customer's catch become a keeper? Should most users still consider the full OS/2 package as a more robust option? And for the IS department, does OS/2 for Windows offer an important enterprise option—or simply another support headache?

Under close scrutiny, OS/2 for Windows turns out to differ very little from OS/2 itself. Our initial tests indicate that other than the missing WIN-OS/2 components (which are supplied by Windows itself) and a few changes to the device drivers and DLLs that handle Windows-to-OS/2 communications, very little has changed from OS/2. Surprisingly, even the few critical DOS-related files we would have expected to find modified (such as the DPMI manager, which affects memory management within DOS sessions) have not changed. Apparently, OS/2's VDM (virtual DOS machine) was nearly capable of running Windows when shipped last summer.

This should ease management concerns at large sites. With so few differences in the core code, it should be possible to update both OS/2 and OS/2 for Windows from the same Service Pack when IBM issues bug fixes (with a Service Pack already in beta, we should find out soon). The similarity also decreases the chance of radically different problems occurring at sites using both flavors of version 2.1.

From the user's perspective, almost nothing has changed. It's almost impossible to determine which package is running (not even the help menu's Product Information box tells you that you're running the Windows edition). All of the WIN-OS/2 functions continue to work. You may select Enhanced Mode or Standard Mode for your Windows programs. If you're concerned that a new product release (such as Word for Windows 6.0) might crash and bring down other Windows apps, you can run it in a separate session that isolates the problems to a single window—just like OS/2. (We did run into one installation that refused to run apps in separate Windows sessions. As of this writing the problem is unresolved, but appears to be related to the hardware environment.)

Ferengi does, however, offer a substantial advantage to Windows power users—especially those who count themselves as OS/2 skeptics. When you install a new Windows package through OS/2, it also installs to DOS/Windows, and vice versa. (After all, the same Windows code, .INI files, DLLs, and so forth, run both the DOS and OS/2 sessions.) So after installation, you can simply dual-boot back and forth between OS/2 and DOS. Unlike WIN-OS/2 in the standard package, you will never need to migrate packages, run an install twice, or tediously update system files by hand.

Ironically, OS/2 for Windows may be the best option not only for the Windows power user, but also for the user who doesn't run Windows apps—and never wants to. If you're a DOS diehard, you can install OS/2 for Windows on a DOS-only system and gain access to OS/2 apps and DOS multitasking; all that's missing is Windows support. Should you later decide a few Windows apps would broaden your horizons, simply load Windows onto the system and run OS/2's selective install to establish a link between OS/2 and the newly installed Windows.

Since OS/2 for Windows relies on Microsoft Windows code running under OS/2 rather than modified Windows code integrated into OS/2, we expected performance degradation with respect to WIN-OS/2. Surprisingly, OS/2 for Windows was faster in all tests. The differences are not noticeable in actual use, however. Typically, the performance improvement was on the order of a second or two over the course of a minute, or well under five percent.

In addition to simplified system maintenance, OS/2 for Windows establishes a new level of confidence in IBM as an operating system developer. While IBM no longer has access to new Windows source code, OS/2 for Windows demonstrates that IBM doesn't need that code to enable Windows compatibility under OS/2. For years, Quarterdeck revised QEMM and DESQview to maintain Windows compatibility. Now, OS/2 for

Windows enters the market with a similar mission.

More often than not, a rapid response to changing technology reflects a market-driven environment rather than a technological one. When hundreds or thousands of installations are at stake, new applications and operating systems require a period of testing before commitment to widespread distribution. Whatever changes we see in future versions of DOS and Windows, we will certainly see some lag time between new operating system features and new software that uses those features. System developers seek to minimize that delay with extensive beta testing programs and early developer conferences and distribution of software developer kits, as Microsoft is now doing with Chicago.

Nonetheless, these development intervals create a window of opportunity for IBM and OS/2—and a window of opportunity for native OS/2 application developers.

All things considered (simplified system maintenance, compatibility, responsiveness to a changing market, performance, and price), OS/2 Special Edition for Windows appears to be not just a marketing gimmick aimed at the home market, but a viable platform for corporate standardization. ◆

The Battle for Market Share

BY MICHAEL KOGAN

Today, OS/2 is the best system available that offers a multitasking, protected environment for running DOS and Windows applications, an object-oriented GUI, and a platform for new 32-bit applications. OS/2 is used primarily in downsizing corporate environments that want a 32-bit mission-critical platform that reliably integrates productivity and enterprise applications in distributed environments. It is also used in the home and personal productivity markets as a power "Windows-enhancer" or "Windows-extender."

Over the last year, IBM has dramatically improved its marketing and sales for OS/2, shipping more than four million copies, mostly through corporate and over-the-counter retail channels. IBM also plans to deliver symmetric multiprocessing and peer networking versions of OS/2, and is readying beta versions of OS/2 2.2 and Workplace OS.

The Mainstream Market

However, despite these advances, OS/2 does not yet have a significant presence in the mainstream PC market—the high-volume retail channels through which move a large array of hardware and software products for the personal productivity and entertainment sectors. This market is dominated today by preloaded DOS and Windows systems, peripherals, and software. It also provides a steady stream of off-the-shelf products to the downsizing corporate market.

Since the ship of OS/2 2.0 in April of 1992, OS/2 has lived under the specter of Windows. Through the summer of 1993, OS/2 was compared to the unshipped Windows NT. When Windows NT shipped and it became apparent that it could not compete with OS/2 in the 32-bit x86 client market, Microsoft repositioned its products and embarked on development of Chicago to fill the gap in its product line. Throughout 1994 and beyond, it is from Chicago that OS/2's largest challenge will come.

Chicago

Chicago is Microsoft's 32-bit x86 mission-critical client platform, planned for delivery in the second half of 1994. It does everything Windows 3.1 does, and adds a new object-oriented GUI and the ability to preemptively multitask 32-bit Windows programs based on the Win32c API.

Microsoft's plans for Chicago validate what IBM has been telling users they need all along: compatibility, an object-oriented GUI, multitasking, protection, and a 32-bit portable programming model that works on most x86 systems. As IBM says, "OS/2 delivers on the promises of Chicago today." Even if Chicago ships by the end of 1994, it is likely that OS/2 2.X will still be technically superior in terms of maturity, stability, compatibility, and interoperability.

Although in the near-term Chicago will not replace most Windows 3.1 desktops, it will make a significant presence in the mainstream and corporate markets, and the new product will experience rapid growth. Microsoft expects to ship approximately 10 million copies in the first quarter of Chicago availability. Due to Microsoft's outstanding OEM (original equipment manufacturer) and ISV (independent software vendor) relationships, Chicago is poised for wide acceptance in two realms: in the preload market and as the defining platform for mainstream 32-bit applications. These are, not so incidentally, the two major areas of weakness for OS/2.

Making Inroads

The long-term mainstream PC market share of an operating system is directly related to its ability to penetrate the preload systems market and the development of a large base of native applications. Although OS/2 has been relatively successful in the corporate market, it has not made significant inroads in the mainstream market for these two reasons.

IBM's "OS/2 For Windows" strategy and improving support for OEMs are healthy steps in the right direction. However, even though OS/2 is now available as a preload option from many PC vendors, it is rarely advertised or configured as the default preloaded system.

While OS/2 versions of a few of the top productivity solutions are available, they have no real presence in the mainstream market. More often than not, these programs are down-level and/or poor performers compared to their Windows counterparts (see WordPerfect 5.2 or Lotus SmartSuite). The latest versions of the top productivity applications from Aldus, Borland, WordPerfect, Micrografx, and Microsoft (to name a few) are not only unavailable for OS/2, they are not even planned. Furthermore, these ISVs are focusing on Win32c development. Why?

1. OS/2 runs Windows programs well. Thus, an OS/2 user is viewed by the ISV as another Windows-capable platform and a potential Windows application target.

2. The return on investment for developing an OS/2 version of a Windows program that already runs on OS/2 does not justify the cost or expenditure of resources. It is also simpler and more profitable to focus on developing and supporting a single cross-platform version—a version that will run in an OS/2 environment but is not native to it or optimized for its attributes and features.

3. The specter of Chicago and Microsoft's plans fall darkly over ISVs. They know from past history that if they do not have applications available when Chicago arrives, they may lose to Microsoft and others who have 32-bit Windows applications ready, a significant opportunity for new mainstream market share. Thus, many ISVs are focusing on Win32c development while riding the wave of profits from their 16-bit Windows programs on the ever-increasing number of platforms that support them.

4. Win32c applications also run on Windows NT, and they can be recompiled to run on any non-x86 (in other words, RISC) Windows NT platform today—IBM is years from offering the kind of cross-platform support available today on Windows NT.

Relations with Developers

While IBM's marketing and sales efforts have improved, IBM's developer relations still have a long way to go. IBM has had a full three-year head start on Microsoft to get mainstream ISVs to build native OS/2 applications that exploit the power of OS/2, but it has been minimally successful at best. Furthermore, IBM has been unable to create a demand for OS/2 applications.

Even though OS/2 may be technically better than Chicago, the lack of native applications has the potential to permanently pin OS/2 into a box with the label "Windows-enhancer." If ISVs continue their move toward Win32c as the 32-bit development platform of choice, IBM faces a difficult decision on the future of OS/2.

Should IBM provide Win32c and Chicago application compatibility in a future release of OS/2 or as a personality on Workplace OS? The ability to run Win32c applications on OS/2 would be a plus for OS/2 users, but it may continue to be an inhibitor for the development of OS/2 applications by allowing ISVs to continue development for Win32c. On the other hand, if OS/2 does not provide this ability in the future, what choices does this leave OS/2 users who want to run the latest productivity application software based on Win32c?

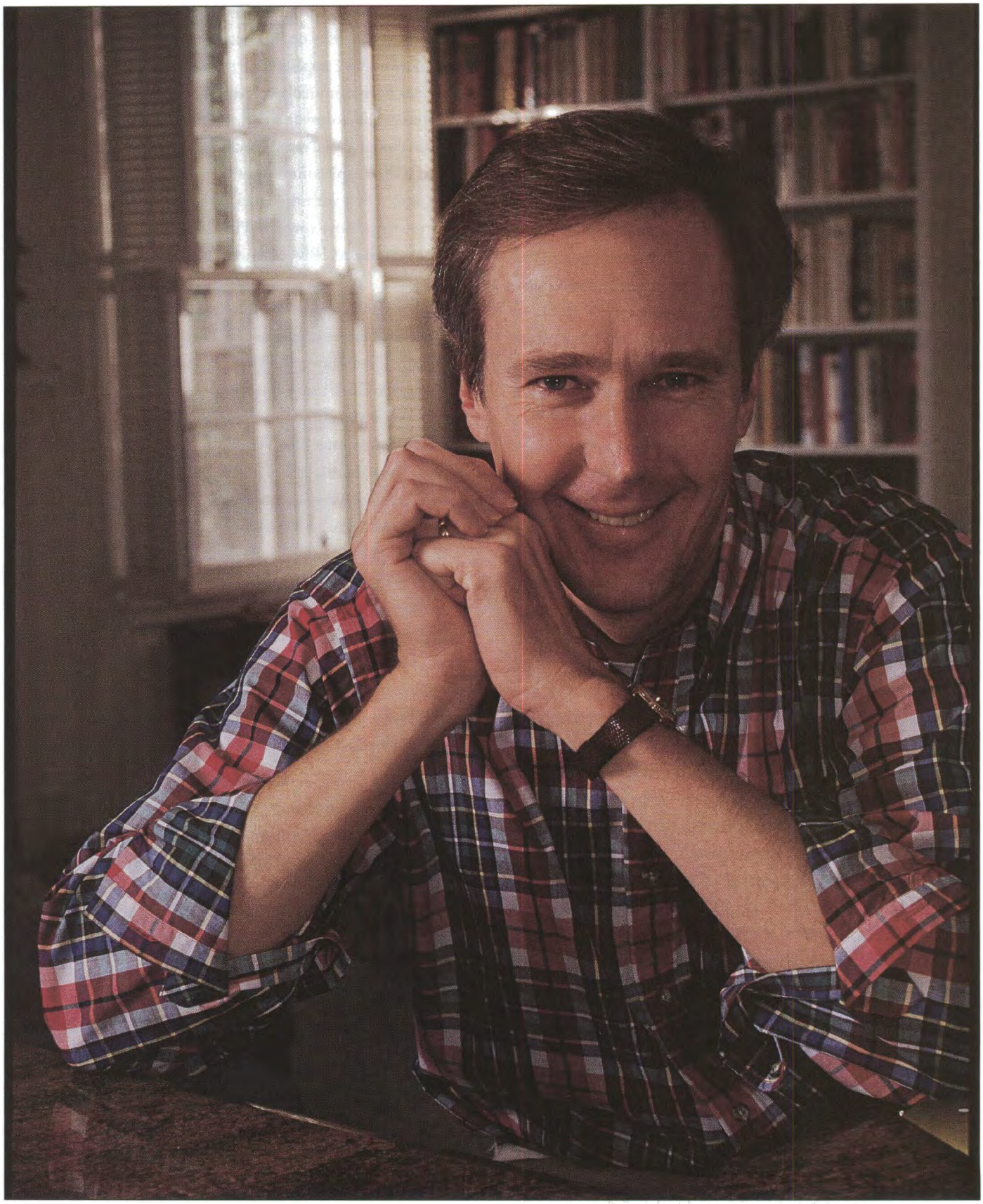
Good backward compatibility is an important requirement for operating systems, but if there is no forward-driving new applications synergy to balance it, a system becomes an alternative environment rather than a new application platform. On the other hand, without backward compatibility a new system is a less attractive migration path. Without an effective strategy and vision, backward compatibility can lead to a "damned if you do, damned if you don't" scenario.

Conclusion

It's going to be years before 32-bit operating systems and applications have a significant portion of the mainstream market. Nonetheless, the battle for the future mainstream market is happening now within the hearts of ISVs. With the top ISVs refocusing on Win32c and Chicago, IBM must be concerned about the long-term prospects for OS/2 in the mainstream market.

Market share in the mainstream market is also critical for OS/2's long-term success in the corporate market, because corporations need a large selection of productivity applications to integrate into their enterprise environments.

In 1994 IBM must embark on an aggressive program to stimulate OS/2 applications development, create a demand for OS/2 applications, and demonstrate a vision and a plan that deals with the issues of Chicago and the ever-changing market. The window of opportunity is still open for OS/2. ◆



Photos: Vickie Lewis

USER PROFILE

Multithreading Inside the Beltway

Jim Fallows usually sticks to public policy. But when OS/2's multitasking capabilities won over the Washington journalist, he put his feelings in print. Now he's thinking about taking on the computer press and its "Beavis and Butt-head mentality."

BY BARBARA DEPOMPA

It's a bit intimidating for a writer to pull an assignment to write about a successful writer. So when I pulled up to the stately white brick home, nestled among trees in Northwest D.C., I had to take a deep breath to calm my nerves.

But Jim Fallows smiled as he answered the door, tall and slim with light hair and blue eyes. And there was a hole showing in his right sock.

That made *me* smile. Perhaps this wouldn't be so difficult after all.

Fallows is a tinkerer, a 15-year computer aficionado. He swears he has kept the same PC for four years—except that when pressed, he'll admit that the only thing he hasn't had replaced is the case.

He's also a successful contributor to the *Atlantic Monthly*, writing primarily on public policy issues. And he has authored a soon-to-be-published book on Japanese culture and Japan's economy, based in part on what he learned as a Far East correspondent for the *Atlantic* from 1986 to 1989. The book is called *Looking at the Sun*, due to be published in March.

Fallows is a family man as well, with a wife, two teenaged sons, and a lovable gray-haired cat. His home is his workplace, and for him the two are closely intertwined. In fact, he's given to quoting Freud's assertion that the meaning of life is in love and work. As if to illustrate the point, his wife and sons each passed by with a quick wave during our interview in the living room. Only the cat didn't pass through—he sat in on the interview, alternately chewing on my pen and sleeping on Fallows' lap.

Originally from Southern California, Fallows is a Harvard-educated Rhodes Scholar who was once head speech writer for President Jimmy Carter. He's also, as he puts it, a "contemporary" of Bill Clinton's. But he insists he has an aversion to being too closely tied to the political happenings of two presidential administrations.

"I think people who write about public policy ought to work in the public sector—once," he maintains. And he means *once*: "More than once, and you may appear untrustworthy or suspect."

While Fallows primarily covers and writes about government policy issues ranging from defense to immigration and the federal budget, he also has written articles about his long-standing avocation, computers.

Long-standing doesn't quite tell the tale, in fact: He bought his first computer before PCs were even born.

In January 1979, when he'd just finished an article that contained the name Zbigniew Brzezinski several dozen times, he realized "my fingers wouldn't hold up through a full career at this rate." So he bought a Processor Technology SOL-20, a system normally used to control a peanut sorting line. (Yes, the first computer Jim Fallows used controlled an electric eye device that inspected nuts as they streamed by in a line and kicked out ones that were the wrong color.) The system had enough power to run a word processing program called the Electric Pencil, although the salesman had difficulty understanding why Fallows would want the system to display upper and lower case letters on the screen.

"Back then," he recalls, "people laughed at me. They said things like my articles would sound like they were written by a machine."

Saving a relatively brief document (on audio tape!) took 20 minutes. Now, the writer says, "I get peeved if my computer takes more than a second to store a book-length manuscript."

In the decade and a half since, Fallows has logged countless hours learning, using, and tinkering with computers. His system currently sports a 486/66 microprocessor and a 600-megabyte hard disk to store the stories, notes, and other research for his articles and books. He has configured and reconfigured it many times and has mastered a multitude of applications. "I'd learn the program, use it, and then decide to keep or discard it, based on whether it was actually better than what I was already using."

The journalist went through many software programs that way, but largely only one operating system: DOS. Until April 1992, that is. That's when, on the day it was unveiled, Fallows ordered version 2.0 of OS/2. He did so because he was fascinated by the promise of being able to run more than one application at a time, and was looking for some way to get around the constraints imposed by working in a DOS environment—primarily the poor multitasking capability, as well as memory and storage limitations.

"Without OS/2, I'd need five separate computers to run all of my programs as fast as I currently can."

He estimates he's spent hundreds of hours "manual reading, disk formatting, error trapping, and e-mail sending" to set up OS/2 as his system. "I could've loaded the operating system in an hour or two, like most civilians would do, but instead it has been the joy of figuring it out that was as satisfying as finally working with OS/2," he says.

In fact, in a candid moment, Fallows admits he has at times been addicted to what he calls "compu-porn"—a compulsive desire for new equipment and software. (He's also been known to blow a few hours changing all of the icons on his OS/2 desktop so they resemble characters from "The Flintstones"—Fred for his word processor, a talkative Wilma for the telecommunications program, and so on.) And he was forced to erase Tetris from his computer after he found "I was powerless to stop playing the game."

As he learned to exploit OS/2, the writer gained an insight into the power and performance of the operating system—a sense that seemed completely at odds with what he had picked up in the computer trade press. He characterizes much of the latter as "a faddish, herd-minded outfit with a Beavis and Butt-head mentality that seemed to say, 'Windows is cool and OS/2 sucks.'"

Fallows' experience with OS/2 prompted him to write for the *Atlantic* a piece that discussed "the gap between what I saw when I read the program and what I read in the computer press." In the article, which appeared in February 1993, Fallows argued that OS/2 is in fact "cool." He calls OS/2 a "crash-worthy speedster" and says "Windows has been presented as a Macintosh-like tool for Everyman and OS/2 as the nerd's delight, but from what I've seen OS/2 can do more for more users than Windows can."

He goes on to describe some of the advantages he's found to using OS/2, including its reliable multitasking capabilities, which eliminate the typical "share of logjams and dead periods" that occur when "you wait for a document to print, you wait while something is copied onto a disk, you wait while a tape drive backs up your files, you wait as a spreadsheet recalculates, and you wait as a database finds what it's looking for."

Fallows' article struck a chord. In fact, the amplitude of the response of the OS/2-using *Atlantic* readership was eyebrow-raising. People contacted him after the article was published to applaud his point of view. IBM also got in touch, to buy the rights to distribute the article to its sales force and prospective customers.

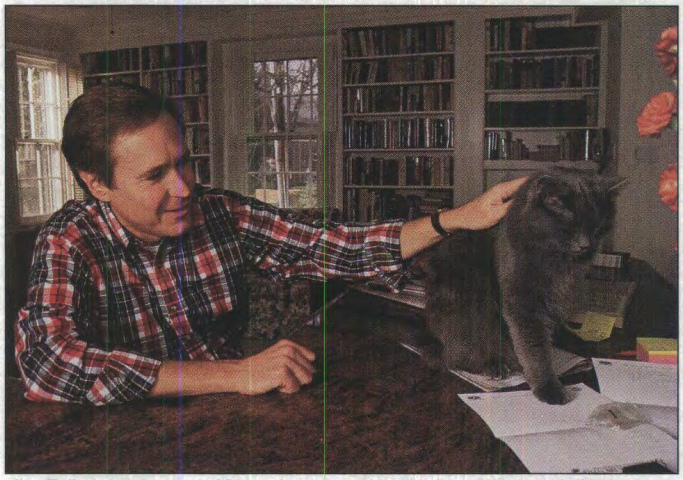
If there's a down-side to Fallows' no-worry, no-waiting computing, it's that he has now gotten to the point where he tends to take his operating system for granted. "It's no longer interesting because it works so well," he says (with what the careful listener may conclude is a slightly wistful tone). For instance, just before our interview, he was fixing footnotes, running two separate search programs, proofing final edits, and faxing a final version of the last 30-page chapter to his editor—all at the same time. And he was able to print a copy of the entire manuscript without a tiny hourglass ever showing up on the screen, or waiting for "slow as molasses" periods between each action. "Each program was working as fast as if it were the only thing running at the time."

Now, he says, computing becomes frustrating—and thus, in Fallows' lexicon, interesting—only when he is forced to use

someone else's PC. "That's when I realize I can only do one thing at a time," he says.

Fallows currently runs a variety of programs, but most often uses the OS/2 word processor DeScribe and two specialized DOS-based data management programs, Magellan and Agenda, both from Lotus Development Corp. He uses both programs to perform word searches and to keep track of the thousands of interviews he has conducted over the past several years.

As he writes, Fallows uses Magellan to track down random bits of information. An example was the text of an interview with a Japanese executive, which Magellan located for him among the 600 megabytes of data on his hard disk. Agenda is a data tracking program that Fallows used to arrange press clippings on the Japanese economy. Once the software had catalogued the clippings, Fallows found it easy to come up with illustrations for the points he sought to make in *Looking at the Sun*. In fact, Fallows notes that a criticism of his book (one of the few, he insists) is that it suffers from *Agenda-itis* because he often uses 10 illustrations of a point when five would do.



Jim Fallows enjoys working at home—with all its comforts and distractions.

Today, Fallows is a man in transition. Having completed the final footnotes on his book, he's looking forward to its publication this spring. He's also tolerating the renovation of his office.

His current working digs consist of a PC and a table in a cramped basement room. At the moment, his future office in the attic is a typical construction scene—exposed pipes, cables, and wood beams, lots of dust, and lots of plastic and rug remnants on the floor. When it's done, though, with walls removed and the beams exposed, the long, narrow third-floor space will offer a lovely view of the woods behind his home.

Meanwhile, he's thinking about upcoming projects, including another in-depth article about computing. This time he wants to examine the computer business, including a sharp look at what he sees as the relative "immaturity" of computer press coverage. As a journalist, one of his biggest pet peeves is how many consultants, analysts, and others with ties to computer vendors are also contributing writers for computer trade publications. He's also likely to offer a comment or two on what he sees as a widely accepted practice of accepting free products and other gifts from vendors.

Fallows acknowledges that in addition to his journalistic calling, he has discovered within himself another compelling duty as well—converting others to OS/2. One suspects Fallows' friends and colleagues are familiar with this bent of his, given how freely he talks about them. He divides his journalist friends, in fact, into two categories: those who have an intrinsic interest in their computer systems and those who will accept the change to a new operating system only if it's made as painless as possible. Of his friends in the former category (those tend to be the ones he contacts regularly via MCI Mail), "I've steered quite a few to OS/2," he notes.

In proselytizing for OS/2 2.1, Fallows notes it is ideally suited to single users like himself. "Without it, I'd need five separate computers to run all of my programs as fast as I currently can."

The next step in Fallows' argument may be a step too far, but it is one he does not hesitate to take: Without OS/2, he claims, he wouldn't have been able to complete his work on both the book and his various other articles for the *Atlantic*. Since journalism does not many millionaires make, hiring the additional help needed to complete all of his daily workload would not be an option.

So if you've been enlightened, diverted, or informed by Jim Fallows' work, thank OS/2. It's the kind of tale of productivity that makes you look at the term *operating system* in an entirely different light, don't you think? ◆

Barbara DePompa is a freelance business and technology writer based in Germantown, Maryland.

Photo of Michael J. Wilson by Wernher Krutein

VENDOR PROFILE

unifAcing with OS/2

Given today's trends toward heterogeneous environments and client/server architectures, marketing a multiplatform development tool looks like the right thing to do.

BY RICH SCHWERIN

The wind blows steadily at six knots from the northeast over the unusually calm waters of the San Francisco Bay. A massive 747 thunders from the sky, wing flaps down, as it approaches Oakland International Airport, hovering for a split second before landing, as if deciding whether to take off again. Then it commits: a perfect landing. Michael J. Wilson has arrived.

The President

Wilson, president of client/server development tool vendor Uniface Corporation, enjoys the five-minute drive from the airport to his company's U.S. headquarters in nearby Alameda—a location about as ideally situated as one could want, within 20 miles of three of the largest database vendors in the U.S.

The brevity of Wilson's trip from airport to office is especially welcome after his recent business tour (he was promoting the upcoming Uniface for Macintosh release), a 10-day global circuit with a half-dozen stops, including one at Uniface's world headquarters in Amsterdam, Netherlands. There, Wilson met with Uniface CEO and founding visionary Bodo Douque.

Uniface, founded in 1984, is a leader in client/server application development tools for professional developers of high-performance business applications. The company specializes in a high-level development tool called Uniface that is used to build enterprise client/server software applications for companies ranging from Black & Decker to Mercedes Benz.

Although the company released Uniface for OS/2 only recently, Wilson notes that it is already becoming a successful addition to Uniface's business. Why? Simple, says Wilson: the OS/2 market is expanding.

Wilson, a native of Spokane, Washington, began work with Uniface in October 1990 when the corporation opened its Alameda office and entered the North American application development software market.

Since that time, Wilson, 40, has been working non-stop. "Fourteen-hour days, six days a week seem to be the norm for me," he says with a smile. "It doesn't bother me. I love what I'm doing, and I truly believe in our product."

The Product

Uniface, a high-end fourth-generation language (4GL) client/server application development product, first hit the European market in 1987, invading the U.S. three years later. It competes with other 4GL tools from Oracle, Informix, and Recital.

Uniface supports most operating systems, including DOS/Windows, a majority of Unix flavors, and Hewlett-Packard's MPE/iX, VMS, VOS, and Stratus. Support is also offered for mainframe operating systems, such as MVS and VSE.

Perhaps most importantly, and certainly most recently (1992), Uniface supports OS/2. Uniface for OS/2 is a native 32-bit application that takes advantage of the OS/2 2.1 Workplace Shell and multithreading. Using Uniface, a developer can build applications in OS/2 and deploy and port them across any supported operating system.

Or vice versa. But chances are developers will stick to "hacking" in OS/2, explains Hal Steger, Uniface's director of product marketing.

"True 32-bit multitasking and multithreading make OS/2 a developer's favorite—a kind of developer's wet dream," says Steger. "Who wants to develop in Windows anyway? OS/2 offers so

much more productivity and portability. And the irony is that we can run Windows under OS/2 faster than Windows can run Windows."

Steger is an avid open systems advocate who says he writes code in OS/2 all the time. He's worked for Uniface since jumping ship at cross-Bay 4GL rival Oracle nearly three years ago, and he brightens visibly as he describes the entrepreneurial spirit and open attitude that attracted him to the company in the first place.

This enterprise culture is exemplified in the monthly 5/15 reports that all employees are encouraged to submit for review. The 5/15s, explains Wilson, are intended to provide a key 20-minute summary: five minutes worth of job report—what each employee has been and is working on—and 15 minutes worth of ideas for improving the way Uniface operates. Several great ideas for advancing Uniface's business practice emerge during each cycle, Wilson notes. Such ideas have included a plan for telecommuting to eliminate unnecessary commuting and stream-lining of work flow processes.

The History

From her corner office in Alameda's Harbor Bay Business Park, Anu Shukla orchestrates Uniface's global marketing efforts. The company's products are sold through a network of more than two dozen distributors to more than 30 countries, including Germany, Switzerland, and France. In Paris, in fact, France Telecom recently purchased Uniface for OS/2 to support 10,000 users—the largest Uniface for OS/2 site in the world.

Shukla, a native of New Delhi, India, and devoted vegetarian, munches on chips and a green salad while the rest of her 100 coworkers at the Alameda site enjoy burgers and hot dogs at the weekly Friday barbecue. She joined the company at the same time Wilson did, as part of the original management team that launched Uniface into the U.S. market.

Shukla describes the creation of Uniface with reverence. "The gang of six," she says, alluding to the six men who founded Uniface in Amsterdam in 1983, "are the true visionaries behind the success of this company."

Led by CEO Bodo Douque (see sidebar, "Bodo on the Issues," page 43), the "gang" started Uniface to improve what they believed was a flawed software development process. Espousing a philosophy of open products, support for industry standards, technology independence, cooperative relationships, and technology leverage, the six formed a company called Inside

Bodo Douque on the Issues:

On the founding philosophy of Uniface:

"First, we wanted it to be multinational. I am a great believer in the global village. Second, we wanted it to be a flat organizational model. We wanted to avoid the bureaucracy and internal politics that had crippled other companies we had worked for. Third, we wanted to develop an innovative, unique product. Lastly, we wanted satisfied customers—we wanted to seek input from users to develop and refine the product."

On the marketplace then and now:

"In 1987 most applications ran on minicomputer-based or host-based systems. Relational databases were just coming out, and Unix was in its infancy, an unknown entity. Everything was much simpler then. Now client/server is all the rage. PCs are everywhere, and you need to be tied into the enterprise information system framework. Relational databases are becoming commodities. You need the methodology of the old IS systems, down to the PC level. Uniface provides an industrial-strength tool that accomplished this."

On Uniface's commitment to OS/2:

"The customers made the decision. Many of our customers doing enterprise work had the need of a 32-bit, preemptive, multitasking OS that would run their applications with good performance. Other factors involved in the decision were Uniface's good relations with IBM and the clear lack of a significant industrial-strength tool on OS/2."

On Uniface's performance with OS/2:

"Unlike other desktop systems, OS/2 is microkernel based, has a 32-bit system, and is stable, fast, and cost-effective. It has its own GUI—Workplace Shell—and is the foundation of IBM's workplace vision. It also runs DOS and Windows applications, and is a very viable platform for application developers."

Automation, which soon became Uniface.

Douque and his colleagues positioned the new company to fill an emerging market need for a powerful application development environment that would decrease development time and reduce maintenance costs while allowing the customer to integrate new technologies in a heterogeneous environment.

At first, the customer base was small, confined to European chemical and financial businesses. But after a decade of operation, Uniface has expanded to serve aerospace giants like Boeing, manufacturing concerns such as BASF, petroleum conglomerates Shell Oil and BP Oil, and electronic superpowers IBM and NCR.

As a result, privately held Uniface (ownership is shared, with 20 percent held by employees, 40 percent by management, and another 40 percent by venture capital groups) has seen revenues climb from $6 million in 1982 to more than $90 million in 1993.

At a Glance:

Uniface Corporation
Founded: 1984
Founder and CEO: Bodo Douque
President: Mike Wilson
Location: Alameda, CA
Number of Employees: 100
Product: Uniface, a 4GL development tool used to build enterprise client/server applications.
Operating Environments: OS/2 2.1, Windows, DOS, Unix, MPE/iX, VMS, VOS, Stratus.
1993 sales revenue: More than $90 million

What lies in store for Uniface in the future? Nothing but good, Shukla suggests. The enterprise computing tides, she believes, are flowing in her company's direction. The trend toward heterogeneous open environments will continue to grow as more and more corporate finance and IS officers acknowledge that making optimal use of a company's existing installed base is necessary to keep costs under control.

As a result, users will find the obstacles to heterogeneous open systems becoming less overwhelming. And vendors that produce the tools that help integrate the old with the new—vendors such as Uniface—will reap the benefits. ◆

Rich Schwerin is a San Francisco-based technology and business writer, whose work has appeared in Corporate Computing and PC/Computing.

EYE ON THE MARKET

Getting Back to Business

A well-designed resume feature not only sets some notebooks above others, it also enhances productivity on the road.

BY JONATHAN L. LEVINE AND BRADLEY D. KLIEWER

A notebook computer is many things to many people. It's a diversion on a trip, a way to stay in touch or catch up, a portable reference manual. But above all—and the reason why a journey up the aisle of any commercial airline flight or Metroliner will reveal a forest of notebooks in use—a notebook is a productivity tool.

A good tool, be it a drill, a sewing machine, or a portable computer, is one that is well-crafted, easy to use, and effective at what it is designed to do. In the case of a laptop, that means a readable screen (preferably in color), a comfortable keyboard, and a powerful, responsive hardware design.

Responsive. Let's say you're a salesperson on the road. While sitting next to someone on a train, you strike up a conversation—and discover that your companion is a sales prospect. She's about to get off the train and you need to note how to get in touch with her. So you grab your notebook, turn it on—and wait. And wait. And wait! By the time the machine is on, OS/2 has booted up and your sales lead tracking app is open, she's long gone.

So what do you do? Simple: You grab your notepad (not your notebook) and jot down her name, phone number, and a brief note to remind yourself later who she is (that is, if you have time later, and you remember, and you don't lose that piece of paper).

Thus, one of the features that sets one notebook apart from another is a well-designed resume feature. All resumes are not created equally. Indeed, several factors affect both the start-up and shut-down time as well as the duration of the sleep state.

As you peruse notebook spec sheets, you'll discover several terms for the resume feature: *sleep, suspend, hibernation, deep sleep, standby mode,* etc. What may not be so obvious from the plethora of figurative descriptions is that two very different types of sleep mode are available. The first provides instant access to your data: the system shuts down high-powered components such as the display, hard disk, and external modems while keeping the processor and memory in a low-power state. The second method stores the entire system state to hard disk, then cuts all power to the components. For clarification, we'll call the former method *suspend* mode and the latter *hibernation.*

Hibernation is a slow and storage-intensive process. A system with 12mb of RAM must reserve more than 12mb of storage space on a special disk partition, since not only the RAM contents but also information about the desktop configuration, open files, and video state (among other parameters) must be stored. A system can remain in hibernation indefinitely—with everything safely tucked away on the disk; even if the battery drains completely, the data remains intact. But the process may take too long. An IBM Thinkpad 750 with 12mb of RAM, for example, takes 10 seconds to enter hibernation mode and 54 seconds to restore RAM. While a minute may not seem like much, your perspective can change dramatically when you need the data now!

Hibernation by itself is a useful emergency device that will save you in the event your battery power runs out. The serious productivity-enhancer is a suspend feature—a button you can press to return almost instantly to where you last stopped working.

Notebook manufacturers have begun to recognize the importance of the suspend feature for business users. Unlike hibernation, which relies on data stored to disk, a resume feature keeps the system state (memory and processor activity) in a suspended, low-power state.

Implementations of the resume feature, however, vary widely. Some, in fact, also rely on disk storage—and disk access presents one of the most problematic areas for suspend features. Some systems require an orderly clean-up of the hard disk before entering the suspended state; others require that at least portions of the system state data be stored to disk.

In either case, this process can add time to both the power-down and start-up operations. It also raises the issue of compat-

ibility with OS/2: If the power-up and power-down sequence rely on operating system calls, the management features will be useless without OS/2 drivers. Thus, if the power-down sequence relies on a key code passed by the DOS keyboard handler, similar communication would have to come from the OS/2 keyboard handler.

A better approach implements power conservation and shutdown features directly through the hardware. By isolating the hardware-specific power-management features from the software, the vendor also ensures compatibility with all operating systems and prevents unexpected system freezing.

Assuming the system suspends properly under OS/2, the power drain during the suspended period becomes the next factor. The type of processor, support circuitry, amount of memory installed, and component voltage (3.3 volt draws less current than 5 volt) are but a few of the features that affect duration. These variations in design lead to quite a spread in suspend time (see the accompanying table).

The industry trend in the release of new notebooks is toward a more efficient suspend mechanism and longer and longer periods within which full resumption of work is still possible. For most, such as Toshiba's new 4600C and the Gateway Handbook, extended suspend capability results from a design that shuts down all notebook functions and sends only a trickle charge to the memory.

Zenith claims even longer suspend times based on a custom BIOS chip that initiates the suspend feature whenever the user closes the lid of the notebook, hits the appropriate key, or after a user-specified period of inactivity.

When the BIOS program takes control it first stops the hard disk activity, remembering the last completed read, and stores all the necessary information for restart. Then all notebook activities are shutdown in an orderly fashion, leaving only the RAM powered. The notebook can stay in this mode for up to two weeks, depending on the amount of memory installed and battery status, Zenith claims.

When the user next opens the notebook lid, the BIOS reactivates the hard disk at the exact same location and continues processing as though nothing had happened. And it really works that way; you don't have to wait until the hard disk indicator light goes off or the application completes its processing. You can be in the middle of a compile or entering a phone number, close the notebook, and run to the airport. Sit down on the plane and open the

notebook and it will continue the compile or allow you to continue the phone number entry.

The Panasonic 580C is one notebook that *OS/2 Professional* has battle-tested extensively. It has one of the most reliable resume functions we've seen. And, it multitasks under OS/2 impressively.

OS/2 is a powerful operating system, but it is also large, sometimes to the point of being ungainly. The OS/2 road warrior needs a seamlessly functional resume feature, to keep his or her productivity tool available for whenever it is needed. Now complete the package with a lightweight internal auxiliary battery that keeps the system running for a minute or two while changing the main battery on the fly (without rebooting the machine) and you have true continuous usage on the road. And keep an eye on advances in battery technology.

Imagine the power of a system with OS/2-friendly features of the Thinkpad 750, the convenience of Zenith's suspend feature, and an auxiliary battery! Whether you work continuously or are constantly on the run, your system would always be at your service.

Manufacturers listen to the marketplace—make sure you speak your needs clearly enough to be heard! ◆

Jonathan L. Levine is a former IBM employee and OS/2 diehard who is president of McLean, Virginia-based Levine Computer Consulting.

OS/2 ON 4MB?

Oh sure! How often have we heard that OS/2 will run on 4 megabytes so long as it is not overtasked (no pun intended). Well to test that, we loaded Ferengi on a Toshiba Satellite T1950CT notebook with active matrix color screen. We hoped to do some simple word processing or at least run a communications program. How did it perform? We don't know. Everytime we clicked on an icon, the desktop froze. Oh well, we'll just have to wait for 2.2 to run reliably on 4 megabytes.

Edwin Black

THE LIVES OF NOTEBOOKS

Manufacturers' reported suspend durations for OS/2-compatible notebook computers

COMPANY	PRODUCT	SUSPEND LENGTH[1]
AST Research Irvine, CA 92718 • (800) 876-4278; fax (714) 727-8592	PowerExec 4/25SL	2 days
Compaq Computer Corp. Houston, TX 77269-2000 • (713) 370-0670	Contura 4/25Cx LTE Lite 4/25C	1 day 3.1 days
Epson America Inc. Torrance, CA 90509-2843 • (800) 289-3776; fax (310) 782-4248	Action Note 500c & 700	12 hours
Gateway 2000 North Sioux City, ND 57049 • (605) 232-2000; fax (605) 232-2023	Handbook 486	7 days
IBM PC Company Somers, NY 10589 • (800) 772- 2227	ThinkPad 750 models	2 days
Panasonic Company Secaucus, NJ 07094 • (201) 348-7000; fax (201) 348-8164	CF-1000 CF-580C	1 week 1 week
Toshiba America Information Systems, Inc. Irvine, CA 92718-9724 • (800) 334-3445	4600 models	5-7 days
Twinhead Corp. Milpitas, CA 95035 • (408) 945-0808; fax (408) 945-1080	Slimnote 486E	Standard suspend: 4 hours Suspend to RAM: 2 days Suspend to disk: 3 weeks
Zenith Data Systems Buffalo Grove, IL 60089 • (800) 533-0331; fax (708) 808-4434	Znote 486 425Lnc	2 weeks
Zeos International Ltd. St. Paul, MN 55112 • (612) 623-9614; fax (612) 633-1325	Freestyle	1-2.3 days

[1]Length the computer will retain the working desktop and memory with a fully charged battery

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IBM

DOT EXE

Software for OS/2

Scripting by Oberon

The Oberon Terminal Emulator/2, Version 1.24

REVIEWED BY HERB TYSON

During the dark, lonely days of OS/2 1.3, when "best-seller" status for the operating system seemed an elusive dream, one of the few sources of kinship among OS/2 brethren was the OS/2 Shareware BBS. 'Twas there I first learned of the—then—two main alternatives for OS/2 communications software: PMComm or TE/2. PMComm was the option for mouse-aware, but slower-scrolling, Presentation Manager (PM) compatibility. The other option was TE/2—if, that is, you could live without a mouse and preferred the sleek and solid performance of a character-mode application.

While the number of alternatives has now expanded to include HyperAccess/5, Live Wire Communications, SoftTerm, and others, PMComm and TE/2 still remain the top OS/2 communications programs.

With a look-and-feel reminiscent of Telix and Procomm, TE/2 is a multithreaded 32-bit communications program for OS/2. TE/2 comes in two flavors. The better-known is the version available as shareware on BBSs. It performs so well, ironically, that many users never come to know the other flavor: the registered version. When you register TE/2, you get scripting (using REXX as well as TE/2's own script language), the CompuServe B Plus protocol, and an editor for modifying the filter (which modifies characters on the fly as they are transmitted and received).

Installation

One of the things people hate most about trying new software is the installation. Every program that requires any kind of setup should have a reassuring program called INSTALL or SETUP—even if all it does is create a directory and copy files. Fortunately, TE/2 has one, called TE2SETUP. Unfortunately, if you didn't install REXX, you can't use it.

If you fall into the latter category, the VIEW-able TE2.INF file that comes with TE/2 tells you how to install TE/2 manually. You'll do yourself a favor, however, if you take the time to install REXX support for OS/2. Not only will it come in handy for installing and configuring TE/2, but also for a growing number of OS/2 programs that lean on REXX for installation and setup.

Using TE2SETUP.CMD to install and configure TE/2 is quick, intuitive, and relatively painless. The setup program presents you with three options: Install, Configure, and Exit. Then it asks a series of straightforward questions: which drives do you want to use for source and destination, where do you want to install the scripts and host setup, should TE/2 create the corresponding directories, and should TE/2 create a new folder on the OS/2 Desktop?

Configuration is equally simple. You select your COM port, modem, paths, colors, terminal emulation, and so on from a menu. In response to one of the greatest concerns for many users, whether the communications program will support their modem's unique command dialect, TE/2 provides support for two dozen different brands of modems—more than 70 different models in all—including a variety of generic settings for various "Hayes compatible" devices.

Operation

Performance for basic communications, including uploading and downloading, was solid and flawless for each of the four modems I tried (Intel SatisFAXtion 400/internal, Intel 144/144 external, US Robotics Sportster 14400, and the Cardinal 2400MNP). TE/2, while not a PM program, works in an OS/2 windowed or full-screen session. To make use of the OS/2 clipboard, as well as to monitor background communications while uploading or downloading, many users will choose to run TE/2 in an OS/2 window. Either way, operation is smooth, although scrolling speed in a window will vary markedly depending on the speed and resolution of your graphics adapter.

After several years of using a PM-based communications program, I found it a little difficult to give up the mouse. Users familiar with mouseless text-mode DOS communications programs, however, will not mind. Moreover, they'll gain the benefit of a 32-bit native OS/2 program that excels at handling high-speed

background communications without the quirks of emulated DOS serial support.

To further enhance keyboard operation, TE/2 maps the function keys to user-definable macros and TE/2's own commands. You can map the 12 function keys alone, or add Shift, Ctrl, or Alt combinations, thus providing keystroke access for up to 48 macros. TE/2 also provides automatic dialing, including round-robin dialing, which you can use to systematically "attack" a list of BBSs and the inevitable busy signals.

TE/2

Oberon Software
1405 East Main Street
Mankato, MN 56001
(507) 388-7001

LIST PRICE:
The Oberon Terminal Emulator/2, Version 1.24
$65

Scripts

First, the good news: TE/2's scripting is powerful and capable of providing a considerable amount of automation for your communications needs. You can associate scripts with entries in the dialing directory to automate logging onto BBSs and on-line services. Moreover, the next version of TE/2 (not available for review, but possibly shipping by the time you read this) will add a "learn" mode for creating scripts automatically.

Now, the bad news: The scripts provided with TE/2 for implementing a host mode (the ability to handle incoming calls as sort of a mini-BBS) are not ready for prime time. Indeed, the version in the review copy contained a critical error—a slash (/) instead of a backslash (\)—that prevented the host mode from working correctly.

Even after solving that problem, additional bugs in the host scripts prevented me from achieving full success with the host mode. Additional debugging finally brought some success, but only after several frustrating hours of trial and error.

To be perfectly fair, the host script documentation contains a disclaimer. It suggests that while host mode is something you can achieve, the package includes the host scripts more as a starting point rather than as a ready-to-wear solution.

Bottom Line

TE/2 is a solid native OS/2 communications program for people

who need to connect with bulletin boards, hosts, and other online services. It provides an ample array of terminal emulation capabilities—TTY, VT100, 3101, and ANSI. It provides the popular data protocols (Xmodem, XModem 1K, YModem, YModem-G, Zmodem, CompuServe B Plus, and straight ASCII) except for Kermit.

Like HyperAccess/5 (reviewed in the July 1993 issue of *OS/2 Professional*), TE/2 still has some rough edges when it comes to providing a plug-and-play host mode. If you don't need that capability, or if you're willing to explore the scripting language, TE/2 provides solid performance.

Brady Flowers, the author of TE/2, indicates that a WPS-enabled PM version of TE/2 is on the horizon. However, a projected shipping date was not available at press time. In the meantime, if you prefer the familiar face of a text-mode communications program, TE/2 will make you feel right at home. ◆

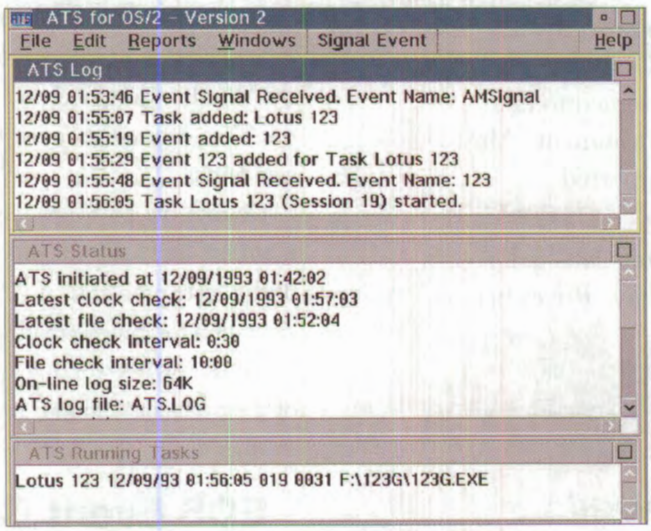
Time after Time

ATS for OS/2 and ECS Event Control Server

REVIEWED BY KEN MACKIN

One of the limitations of most operating systems is their management of routine, time-dependent tasks to control backup, anti-virus measures, accounting transactions, database system updates, and other routine management tasks. OS/2 in particular needs event management more than most operating systems. After all, the product is a crucial linchpin in IBM's enterprise strategy, which involves networking, interconnectivity with mainframes, and "right-sizing" of corporate computing technology.

In fact, though, OS/2 provides one of the best environments for event managers. Its true multitasking is robust, its GUI can be a programmer's paradise, and its conservative memory use (compared with Windows NT) provides plenty of breathing space for simultaneous operations.



Schedulers vary widely in size, scope, and power. We looked at two that represent divergent choices suitable for very different environments.

ATS for OS/2

This professional Presentation Manager-based event handler from New Jersey-based MHR Software and Consulting tells your computer using OS/2 2.0 and higher what to run and when.

The product arrives in simple clothing, with a paperback manual and a single diskette. The "installation" procedure is simply an XCOPY command from an OS/2 Window and the company leaves setting up a program template to you.

Once the program was up and running, I was struck by the simplicity of the interface. Superficially, the main screen reminded me of Hilbert Computing's Chron (reviewed in the August 1993 issue of *OS/2 Professional*). However, a bit of digging revealed the sophistication of this compact set of programs.

The heart of the program is its Define Tasks screen. You set the run specifications through an elegant system of sliders and pushbuttons. ATS gives you a wide range of options to determine when jobs will run, including specific months, specific days of the week, specific day-of-week, day-of-week minus holidays, last-day-of-month, first and last business days of month, etc.

While the software provides an extensive list of specifications, some options are notably absent. For example, ATS for OS/2 doesn't support "every other Thursday or Friday" (for payroll). And while you can tell ATS to omit holidays from the schedule, defining those holidays presents further difficulties.

The problems stem from the Edit screen (where holidays are defined). Unfortunately, holiday definitions are discrete—meaning that Jan. 1, 1994, is a specific, one-time event. The next year, Jan. 1, 1995, is also a separate, discrete holiday. ATS forces you to update these dates individually, a limitation that earns it a major thumbs down. Every U.S. company has Memorial Day, Fourth of July, and Labor Day holidays every year. Why not make these virtual dates, like the "last Thursday in November, whatever year" for Thanksgiving?

ATS for OS/2

MHR Software and Consulting
Suite 146
2227 U.S. Highway #1
North Brunswick, NJ 08902
(908) 821-0359

LIST PRICE:
$249

To further qualify tasks, you may specify additional event criteria beyond simple dates and times: job termination (completion of another ATS-defined task), file modification, and signal event (triggered by ATS-aware applications or command files run outside the scheduler).

In addition to specifying when a program should run, you must tell ATS how to run it. You may select a session type from among Full Screen, OS/2 Window, PM, or Background options. You may further qualify the task as a CMD (REXX or batch) file or an independent OS/2 session.

I also have a nit to pick with the Task Definition window. When all is said and done, and you go to press the **OK** button, the Window doesn't close and you must press **Cancel** to move on. This contradicts most OS/2 PM practice, and the CUA standard.

Despite the problems with its data structure, the program's event handler has some interesting qualities. If MHR took care of the "date problem," ATP for OS/2 would be worthy of consideration for long-term use.

MHR says it is working on a new version that will resolve most of the problems I found. If it does, ATS will certainly warrant another look.

ECS Event Control Server by Vinzant, Inc.

In the mainframe world, systems can have hundreds of custom-built, overlapping, and interdependent applications. The programs on these systems are run in specific sequences or decision trees, a system called *batch mode processing*. The data from a job upstream eventually finds use downstream in another program

built to carry out further processing and make reports. In this way, the huge mainframe systems that provide everything from your phone bills to your banking needs keep everything organized and maintain manageable program code.

These mainframe job streams are orchestrated and planned by a systems scheduler that controls and executes component programs, evaluates error conditions, and produces system reports. The Event Control Server from Vinzant, Inc. is an event scheduler reminiscent of the big-iron systems, and one that brings effective job scheduling to the workstation and network.

Yet while ECS provides a flexible and powerful engine for complex job execution on the network—an engine interoperable on NetWare and LAN Server networks—its text-mode interface and simple macro facilities are a bit disappointing. Ironically, ECS incorporates OS/2 features such as administrator-definable job priorities and multitasking for multiple job streams, but it shuns the Presentation Manager and Workplace Shell.

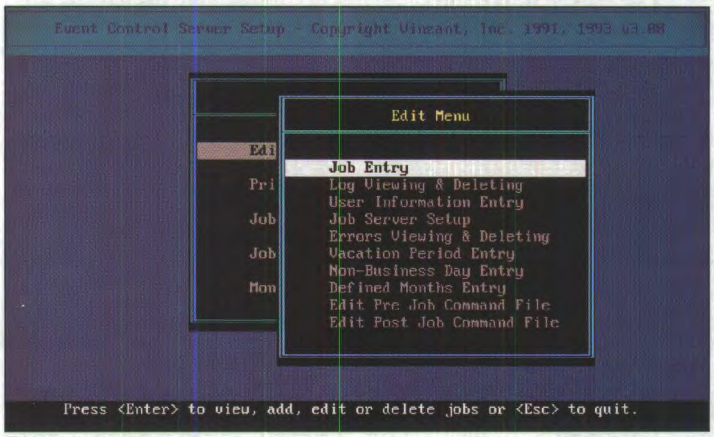


Figure 1.

If you had to characterize ECS, you could say it has a powerful motor and great handling, but the car doesn't have a nice paint job and the doors need some grease. Nevertheless, if you are building intense data processing systems for a LAN or WAN—or even are merely considering it—I recommend that you evaluate ECS to see if it can bring your programs into lock step.

ECS runs in text mode under all three supported platforms (OS/2, DOS, and Windows). Currently, preemptive multitasking and multiple threading set the OS/2 version apart from the other two. However, a soon-to-be-released Windows version will run under the Windows GUI and will multitask like the OS/2 version.

The package arrived on three 3.5-inch disks with a single manual. With a weak index and lacking section markings, the manual is inconvenient as a ready reference. Furthermore, in an apparent attempt to save pages, the manual combines system requirements and installation instructions for NetWare, LAN Server, OS/2, and DOS in a confusing mish-mash of information.

Although the manual offers no samples for various setups in multiple environments, it is effective in defining important terms such as "business day" and "vacation day"—crucial concepts if you want to use the program effectively.

ECS is a time-dependent database application written in C using the Btrieve database from Novell. The Main Menu presents several choices: *Edit Information, Print Reports, Job Monitor, Job Server Monitor,* and *Monitor Your Job Servers.* Job Server Monitor and Monitor Your Job Servers are similar except that with the latter, only the jobs related to your user ID are shown. However, this feature works only if ECS is running under DOS on a dedicated workstation. Which raises the question: if ECS is running under OS/2 and knows it, then why does it not eliminate menu choices useful only to users of DOS?

The scheduling administrator may authorize individual users to submit jobs in up to 10 priority classes in any number of different job servers set up by the administrator. With prioritization, simple report requests and "clean-up" jobs can take a back seat to high-priority time-sensitive jobs.

To better understand how ECS operates, consider an application where the scheduled programs run three separate sub jobs:

- The first activates the communications server to poll for any last minute e-mail at the outlying offices;
- After any new mail and attached files upload to the server, the second job begins scanning all new e-mail, attached files, and changed data for contamination with virus code; and
- The third job, which runs a backup of all new data, will activate only if the second job succeeds. After all, you don't want to back up files that might be contaminated.

As you set up the system, ECS job entries ask extensive questions about the job (see Figure1). This part of the program works very well (although, like the menus, it asks information relevant only to DOS sessions). Should you need additional information,

the well-designed, context-sensitive help is as close as your F1 key. Curiously, the 25th line of the screen lists valid keys but omits a reference to F1. A lucky guess kept me going.

If configured according to our sample scenario, ECS will run the virus check program immediately after the communications program ends. ECS captures and evaluates any return codes your programs offer up to determine whether it should terminate the job stream and produce an error report. After completing the virus check and returning an "all clear" code, the third job (backup) will run. You can also configure ECS to send response messages via Netware's MHS (Message Handling Service) to anyone who might be interested in the results.

The program makes judicious use of MHS, even allowing job submission by remote users via an e-mail message. The program also supports "canned" job streams created by running programs through something called a .WRK file, located in a specific directory. After processing all user jobs, ECS checks the .WRK directory for any program-initiated .WRK files. All

-tory for any program-initiated .WRK files. All in all, it's a flexible and powerful design.

Vinzant provides strong communications support through ECS, including references to products by the high-end communications vendor Cubix Corporation. The program has obvious value for an asynchronous communications system, where ECS informs the comm server that specific polling calls should be made on an hourly, daily, weekly, monthly, and yearly basis. Further setup options tell jobs to repeat in several different ways, such as "after first run time." Vinzant provides a few neat tools that make implementation of non-business days and vacation days simple and clear, simpler in fact than the Presentation Manager-based ATS for OS/2.

ECS Event Control Server

Vinzant, Inc.
600 E. Third Street
Hobart, IN 46342
(219) 942-9544

LIST PRICE:
$1,495 (quantity and site license discounts available)

Vinzant, Inc. is a small firm that provides technical support to users of the product free of charge. Vinzant indicates that it will respond within 24 hours of notification, but notes that the program has been around for a few years and says it is thoroughly debugged. Outside of a sometimes frustrating interface that mixes DOS and OS/2 modalities, Vinzant's claim was verified by my experiences with the software.

Complex, distributed-processing environments demand schedulers like ECS. Provided that Vinzant can devote some further development time to the interface and manual, it will be in a prime position to offer the complex, event-driven scheduling modern networks require. I see ECS's true long-term value as the scheduling heart of a distributed database system, bringing the scheduling and reporting capabilities of a mainframe system to the distributed networks currently under development around the country. ◆

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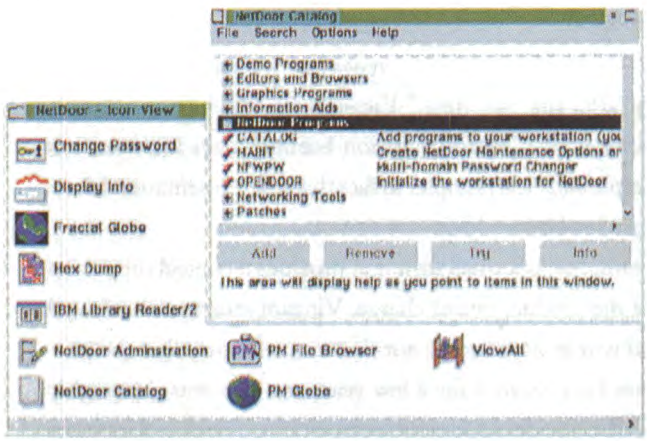

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The ICCS system meets most of the objections that users have had in the past to speech recognition, including high cost and complex hardware.

BY WAYNE RASH JR.

You've seen it every week for two decades: The captain of the Starship Enterprise looks at a screen and says, "Computer," followed by a series of instructions and requests. In response to the spoken command, the ship's computer does what it's been told to do.

It sure looks nice—but it's too far into the future to take advantage of, right?

Wrong. At an IBM lab in Bethesda, Maryland, there is a computer that spends its time listening continuously to the conversation around it, ready to react instantly to anyone who speaks the word that tells it to pay attention. Like computers you've seen in science fiction movies, the computers in this lab aren't particular about who they listen to—they can understand any normal speech spoken at a normal speed, and they can act on spoken instructions.

The lab is the IBM Continuous Speech lab. There, IBM programmers have created a new client/server speech recognition system that understands any speaker in the language it's been told to listen to. There's no need to train the computer for a particular person's speech, as has been the case with earlier systems. Instead, the IBM Continuous Speech Series, or ICSS, performs a statistical analysis of each phoneme (phonemes are the basic elements or sounds of speech) it hears, and combines it with adjacent phonemes to determine the word it's hearing.

The ICSS system was designed by programmer Vince Stanford to take advantage of OS/2's multithreading capability to give it faster response. In addition, because ICSS is a client/server product, the user interface, which is the client on ICSS, can be doing one thing (such as listening to a phoneme) while the recognition engine on the server is doing something else (such as analyzing the previous phoneme). Once the server determines that the phonemes have created a word, it sends the completed word to the client for further use in an application.

Speaking Your Mind

It is the applications that make speech recognition useful, of course. For this reason, IBM is selling ICSS as a software developer's kit, so that anyone can speech-enable an application. ICSS includes several demonstration applications, including a Jeopardy-like trivia game and a nine-language translation program. Both of these products were developed by IBM's Ora Williamson and Dan Kruse. While the demo applications are limited in their capabilities, IBM provides them as a way for users to see some of the things that ICSS can do and to show how to do similar tasks that meet user requirements.

"We can make nearly any application speech-enabled," says Williamson. She notes that ICSS includes what she calls a "key server"—a product that translates spoken directions into keystrokes, which in turn can be passed to an application.

Williamson's most popular application is the speech translator. This product works with a set of phrases that can be spoken in any of the nine supported languages. When a user says one of the phrases, the software translates the phrase into the target language and speaks it aloud.

Simple Support

IBM worked hard to make ICSS easy to use, Williamson says. The only hardware support that's required is an analog-to-digital converter supported by OS/2. This includes such readily available devices as the SoundBlaster from Creative Labs. Some computers, including the IBM ThinkPad 750, already include an A-to-D chip, so all you need to add is a microphone and a speaker.

Computer hardware is also easy to come by. The basic platform is a computer equipped with an Intel 80486DX processor, along with enough memory to run OS/2 and a hard disk. In short, there's no particularly specialized hardware required. Many OS/2 users can simply load the software and run the package.

IBM adds to the attractiveness of the package with reasonable pricing. You can buy ICSS for $79 before Jan. 31, and $315 thereafter.

Client/Server Workings

For the best performance, you should run ICSS on separate client

and server platforms. This way, the front-end application does speech gathering through the client, which then compresses the speech information and passes it to the server. The server evaluates the compressed speech information, analyzes the phonemes, and uses voice information stored in a proprietary database to determine when a word has been spoken.

IBM Continuous Speech Series

IBM Corporation,
Continuous Speech Labs
6700 Rockledge Drive
Bethesda, MD 20817
(800) 627-8363

FOR MORE INFORMATION:
Contact the ICSS team in the PSPAPROD Forum on CompuServe.

Communication between the client and the server uses TCP/IP. This choice allows each version of ICSS (there are versions for AIX and Windows in addition to the one for OS/2) to communicate with the others using a standard protocol. In addition, TCP/IP communications can coexist on the same network with other networking protocols. That means having a Novell NetWare LAN doesn't keep you from using ICSS.

The client/server structure of ICSS also conveys other benefits, the most important of which is speaker independence. In the past, speech recognition systems had to be trained to the voice of a specific user. Usually, no one else could use a such a system without first retraining it. ICSS is different because it will understand any user of a particular language, including those who speak it badly or with accents.

Another important feature available to ICSS users is the "continuous listen mode." This means that the ICSS computer can be set to listen continuously for a code word, such as the word "computer" in the Star Trek series. Once it hears that word, the ICSS computer then listens for instructions that it can perform.

Unlike some client/server products, ICSS allows the client and server to coexist on the same computer. This can hurt performance some, but it adds flexibility, since it means less of a hardware investment. And, you can then use ICSS on a portable computer.

What's Coming with ICSS

Some experts have called ICSS one of the most important prod-

ucts of the decade. While it's still too early to know if this is actually true, it's clearly important simply because it provides users with a more natural interface. Now, instead of worrying about typing in cryptic commands, you potentially can simply talk to your computer.

Leading off with commercial speech-enabled products using ICSS is an OS/2 Presentation Manager navigator called Quick Switch from Bitware Consulting in Toronto. Other products are due on the market soon, according to IBM. Williamson says, for example, that DeScribe has been showing a speech-enabled version of its popular word processing software.

Despite these halting first steps, it's clear that IBM has an important product. It meets most of the objections that users have had in the past to speech recognition, including high cost and complex hardware. Instead, ICSS offers users and developers a reasonably priced and capable client/server solution to true speech recognition. ◆

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Circle #182

SCOOPS

SmartSuite becomes PSP product

The deal announced at Comdex that unites IBM and Lotus to market the SmartSuite for OS/2 is more far-reaching than a simple co-op or retail assistance program, it turns out.

In fact, some might call it a coup. PSP has now essentially taken over the product and has appointed its own product manager, Bella Gong. At press time, there is still debate over whether the SmartSuite will continue to have that same yellow-boxed "Lotus look" or will be given an entirely new IBM-driven OS/2 persona. (IBM officials reportedly are worried that promoting the SmartSuite box will have the effect of supporting the Windows version of the office suite as well.)

The SmartSuite has been immensely successful. Lotus already has sold out of the first 7,300 copies shipped after Comdex. Now, however, channel resupply issues are complicated by the unsettled product identity questions.

The reason IBM took over the product probably has less to do with the product's success, though, than with monies Lotus owes IBM as part of a two-year-old marketing agreement involving Lotus's wildly successful Notes groupware product. And some observers are beginning to wonder if the SmartSuite arrangement might not become the model for marketing other OS/2-compatible software.

By this thinking, IBM would take over the marketing of more and more of the applications it nurtured; it then would market them along with OS/2 in the corporate marketplace, where Big Blue's field force is still a force to reckoned with.

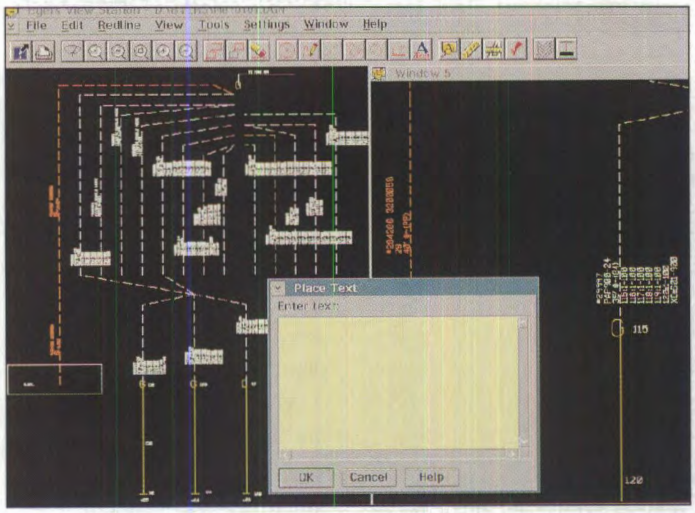
New Products

Graphics in sight

Byers Engineering Company is shipping version 5.1 of View Station, an application that allows viewing, printing, and redlining of MicroStation and IGDS graphics files. The software also features level and weight display options, changeable redline symbology, distance/area measuring, and text search. Byers Engineering Co., 6285 Barfield Rd., Atlanta, GA 30328, (404) 843-1000, fax (404) 843-1004.

Yo YoLambda!

Dynamic Object Language Labs (DOLL) is entering the OS/2 marketplace with its first programming language product, YoLambda for OS/2.



The program is a dynamic object-oriented language that supports the IEEE standard for Scheme programming language. The product is priced at $99. DOLL, Suite 120, 335 Washington Street, Woburn, MA 01801, (508) 372-7635.

Mixin' it up

X Windows allows environments including DOS, Unix, and Windows to communicate with each other and share both screens and images. X Windows is available in an OS/2 format from Age Logic in a product called XoftWare/32 for OS/2. The release, available at the end of December, allows users to cut and paste from network-based Unix applications within any of the three systems. Age Logic, 9985 Pacific Heights Blvd., San Diego, CA 92121, (619) 455-8600, fax (619) 597-6030.

Help wanted

OneOnOne Computer Training is offering "How to Use OS/2, Version 2.x," a self-study audio training course in OS/2. The price of the package, which includes four audio cassettes, data disk, and reference guide, is $195. OneOnOne Computer Training, 2055 Army Trail Rd., Ste. 100, Addison, IL 60101, (708) 628-0500, fax (708) 628-0550.

GUI testing from AutoTester

AutoTester Inc. is shipping AutoTester 2.0 for OS/2 Presentation Manager. AutoTester 2.0 is a complete GUI testing package that includes test synchronization, dynamic window placement, control querying and manipulation, and text retrieval. A new feature in the software is AutoCommand, which generates an automated test, rather than simply a record of the keystrokes and mouse events. Another new feature is the LearnWindow, which "learns" a window and then creates variables. AutoTester 2.0 is priced at $5,000 per copy. AutoTester Inc., 8150 N. Central Expressway, Suite 1300, Dallas, TX 75206, (214) 363-6181, fax (214) 750-9668.

Safety from Syntegration

Syntegration is now shipping a new desktop facility called The Secure Workplace for OS/2 version 1.4. The product is a collection of protection devices, such as a Password Folder that allows users to create their own passwords, a Secure Folder that incorporates a time-dependent password for temporary access to restricted files, and a Restricted Folder, used as a safeguard against inexperienced users who might mistakenly move or delete a file. The Secure Workplace for OS/2 is available for $39. Syntegration, 3241 Norton Avenue, Chino, CA 91710, (909) 464-9450, fax (909) 464-9438.

Plug 'em all in

Network Technologies Incorporated is shipping SE-6M615V-8-ABMK-LOC, a switch that allows eight PCs running OS/2 to be controlled by one keyboard and mouse setup. The unit can be placed up to 500 feet away from the computers. Network Technologies Incorporated, 1275 Danner Drive, Aurora, OH 44202, (216) 562-7070, fax (216) 562-1999.

QEdit comes to OS/2

SemWare Corporation is shipping updated versions of its QEdit products, including QEdit for OS/2 version 3.0. The software is an add-on edit program beneficial to programmers and writers of short memos and letters. The new 16-bit OS/2 version has HFPS and extended attributes support and sells for $79. SemWare Corporation, 4343 Shallowford Rd., Suite C3A, Marietta, GA 30062-5022, (404) 641-9002, fax (404) 640-6213.

Relaxing on the job

In today's work environment it is impossible to ignore the reality of carpal tunnel syndrome and other forms of Cumulative Trauma Disorder (CTD). CTD cases are among the fastest-growing worker injury problems today, and cost, on average, $29,000 per instance in workers' compensation claims.

MyoNetics, Inc., of Satellite Beach, Florida, is offering a product called the ARMx, a forearm support system, as a preventive measure against CTD. The basic model, which costs $349, is a desktop keyboard platform to which are attached "floating" arm supports. With your arms resting in the free-moving ARMx supports, typing is a dream. Proper ergonomic positioning will still require the appropriate chair and, if needed, foot support, but the ARMx support system goes a long way towards improving the typist's work environment. MyoNetics, Inc., PO Box 373099, Satellite Beach, FL 32937-1099, (407) 779-9876, fax (407) 779-9877.

Extended MVS

The Systems Catalogue Facility from Chapman and Associates extends the dataset management capabilities of MVS in the OS/2 environment. The product offers multi-volume dataset support (up to 26 volumes containing up to 2GB of data each), IBM LAN Server support, catalogue services, file system independence, and more. The Systems Catalogue Facility will be available at the end of January. Pricing had not been announced at press time. Chapman & Associates, 11 Mareblu, Suite 130, Aliso Viejo, CA, (714) 831-4442, fax (714) 831-4432.

Just like Vegas ...

Reed Software is shipping OS/2 BlackJack, which replicates the Las Vegas gaming table experience with a choice of house rules such as 1-8 decks of cards, double down on 10 or 11, dealer hits on soft 17 or stays, and insurance offerings. In addition, an autoplay feature allows beginners to watch the dealer play, and cheat features for peaking at the next card or reshuffling. For the full casino effect, the game also has a feature for

ordering drinks that show up on the screen. Reed Software, 330 Medio Court, Henderson, NV, (702) 456-3737.

Just plug it in

After an announcement at Fall Comdex, Improve It Technologies is now shipping Make-It 486, a plug-in processor upgrade chip. After plugging in the new chip, a processor upgrade chip, PCs operate as 486s, allowing users to run OS/2 and other current software and higher-CPU-demand programs. Improve It Technologies, 345 E. 800 South, Orem, UT 84058, (801) 224-0088, fax (801) 224-0355.

OCR abound

Recognita Corporation, a Budapest, Hungary-based company, is shipping the OS/2 version of Recognita Plus for OS/2, its optical character recognition software. Recognita Plus recognizes text in 80 languages and costs $995. Recognita Corp. of America, 1156 Aster Avenue, Suite F, Sunnyvale, CA 94086, (408) 241-5772, fax (408) 241-6009.

Connecting the LAN

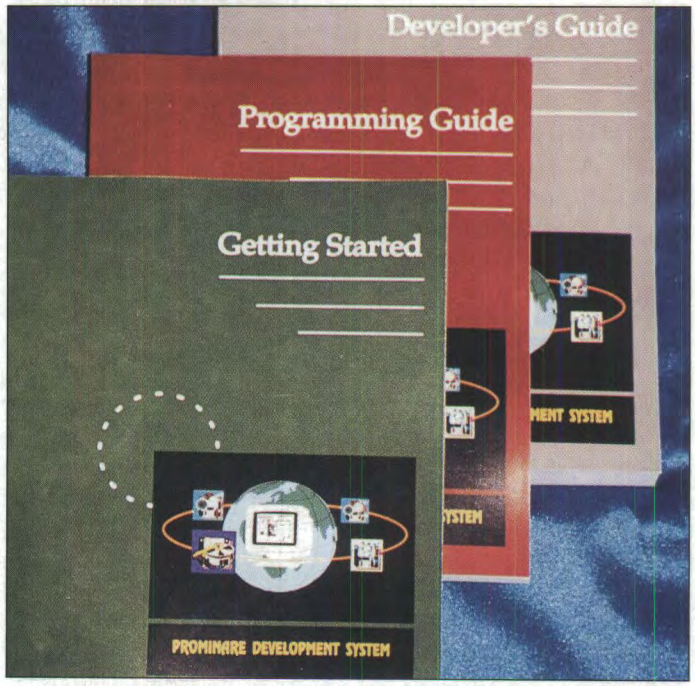
The latest product to come out of the PC Company of IBM is NetFinity version 1.1, a hardware management environment. At the foundation of the new product is NetFinity Services version 1.1, a package of system enhancement tools that includes a system information tool, a security manager, and a system profile tool. Added to the NetFinity Services are four new features that make up the NetFinity Manager: a remote systems manager used for access and control of all remote systems; a remote session capability that enables the user to establish an active remote OS/2 session with a remote system; a file transfer utility; and a screen viewer. The price for NetFinity Manager is $850; the single-user price for the NetFinity Services package is $115. Quantity discounts are available. IBM PC Company, Route 100, P.O. Box 100, Somers, NY 10589, (914) 766-1900, fax (516) 349-3614.

GUI development tool

A new GUI development tool for OS/2 is now available from Liant Software. C++/Views is object-oriented and offers more than 100 classes including interface, data, event, printer, and extended GUI. One component of the application is C++/Views Constructor, a visual development tool that allows developers to work visually with the class library. Another feature is C++/Views Interface Builder, an editing tool for designing and testing GUI objects such as bitmaps, dialogs, and menus. Liant Software, 959 Concord Street, Framingham, MA 01701, (508) 872-8700, fax (508) 626-2221.

Bar code made easy

Bear Rock Technologies is shipping PrintBar Bar Code Fonts for OS/2, a product that supports Code 39, UPC, EAN, ISBM, Bookland EAN, Interleaved 2 of 5, POSTNET, and FIM bar codes. Font prices range from $79 to $179. Bear Rock Technologies Corporation, 4140 Mother Lode Drive, Suite 100, Shingle Springs, CA 95682, (800) 232-7625, fax (916) 672-1103.



Prominairing

Stewart, Dufour & Gossage Ltd. is shipping the Prominaire Development System, a GUI design and code generation tool with a fully integrated development environment and a programming editor. The tool supports all Presentation Manager controls and all currently available C and C++ compilers. Both the single-user and network versions cost $1,295, but each is available for a special introductory price of $895. Extra workstation modules regularly cost $1,195, but are reduced to $795 each for a limited time. Stewart, Dufour & Gossage Ltd., 210-1730 Courtwood Cr., Ottawa, Ontario, K2C 2B5, Canada, (613) 225-2121, fax (613) 225-2624.

Write it right

A new report development tool, Skribe Report Writer, is available from Skribe Software. Based on object-oriented technology, the tool uses a GUI, child reports used to generate more full blown analysis, conditional forms, and conditional objects. It is priced at $695. The Professional version, at $895, includes integration tools to allow incorporation of the Report Writer into existing applications. Skribe Software Inc., 1533 N. Woodward, Suite 150, Bloomfield Hills, MI 48304, (313) 645-2410, fax (313) 647-0737.

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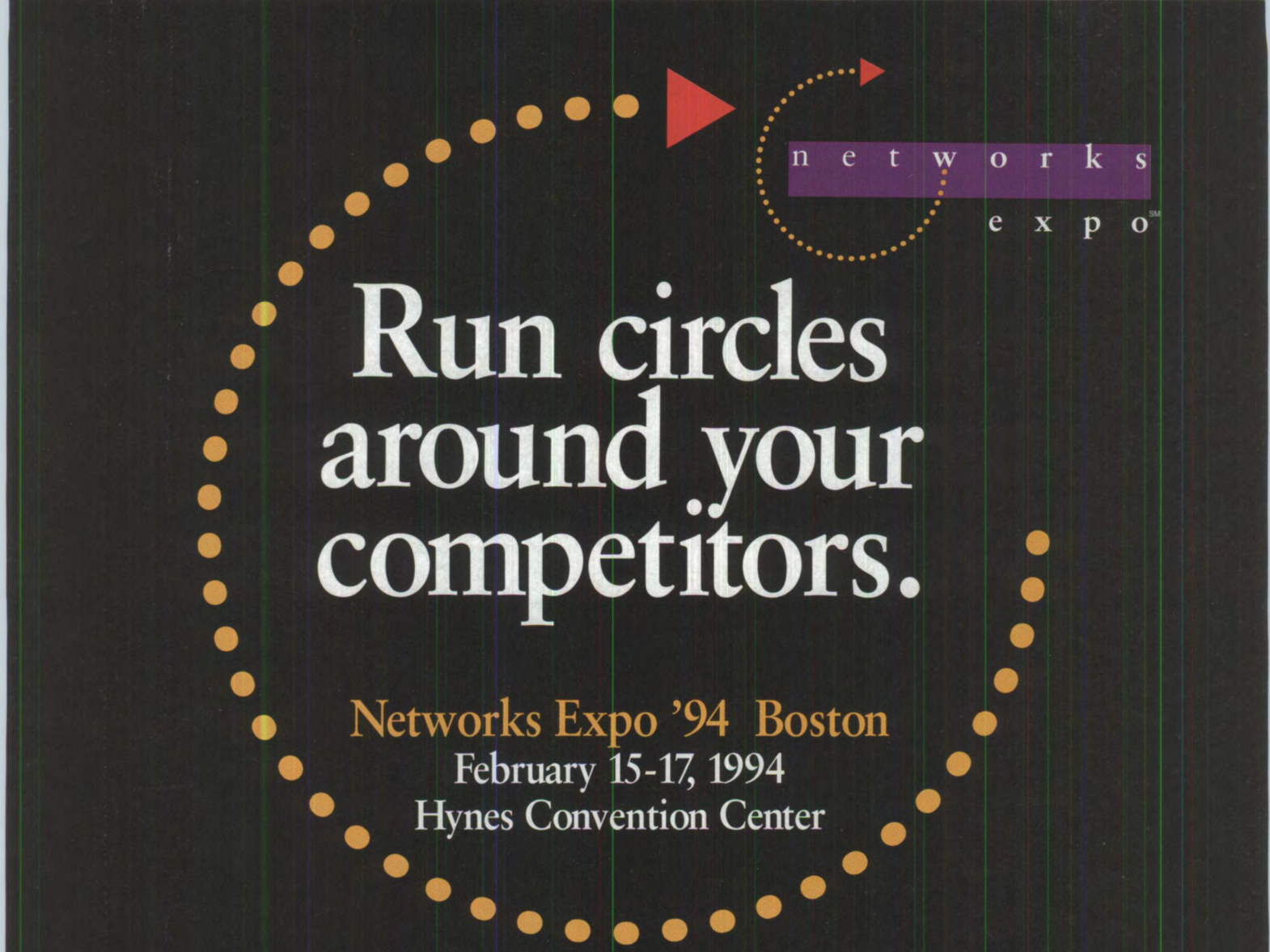

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Circle #183

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Writing multimedia

AimTech Corporation is shipping IconAuthor 5.1 for OS/2. Used for authoring multimedia applications, IconAuthor allows users to combine text, graphics, animation, full-motion analog video, digital video, and audio into a single application. Price of the interactive application, including a four-day training course and technical support for one year, is $4,995. AimTech Corporation, 20 Trafalgar Square, Suite 300, Nashua, NH 03063-1987, (603) 883-0220, fax (603) 883-5582.

Get it together

Team/V, a tool from Digitalk that allows development teams to coordinate their work, is now on the market. Team/V is an extension to the SmallTalk/V object-oriented environment. The key features are a Package Browser, used for creating and organizing definitions, and a Definition Organizer that makes it possible to examine and edit packages and move information within packages. Team/V is currently available and costs $1,595. Digitalk, 5 Hutton Center Drive, 11th Floor, Santa Ana, CA 92707, (714) 513-3000, fax (714) 513-3100.

Upgrade in a Flash

CCT, Inc., will be shipping an upgrade version of its Back In A Flash! backup software. The product began shipping in June and the new version, which supports SCSI tape drives, will be available in Q1 of 1994. The upgrade will be priced at $89. CCT, Inc., 111 Third Avenue, S. Minneapolis, MN 55401, (612) 339-5870, fax (612) 339-5965.

Driving the ThinkPad

Apex Data is offering a new OS/2 driver for its PCMCIA modems. The driver, designed for use with ThinkPads and IBM-compatible notebooks, is free to all customers with the purchase of any Apex modem. The modems range in price from $289 to $379. Apex Data, Inc., 6670 Amador Plaza Road, Suite 200, Dublin, CA 94568, (800) 841-2739, fax (510) 803-9388.

Clean up C++

Gimpel Software has released a new version of its product, PC-lint, for reading C++. PC-lint reads source code with a more critical eye than does a compiler and removes unnecessary information such as unused macros and extra variables. The software is also available from C. Gimpel Software, 3207 Hogarth Lane, Collegeville, PA 19426, (215) 584-4261, fax (215) 584-4266.

Color it faxed

FaxPro is shipping MultiMediafax, a fax software program using standard modem lines that can also send and receive colors as well as all fonts. A version of the application that allows developers and users a free five-time trial is available; the full application can then be purchased for $99. Fax (800) 88FAXUS.

IMS testing from Micro Focus

Micro Focus is shipping a new IMS application testing product. Remote IMS version 1.0 is part of the Micro Focus IMS family, all of which test IMS applications on the workstation through access to IMS/ESA on the mainframe. Remote IMS is priced at $15,000 per logical CPU, and each workstation requester costs $300. Micro Focus, 2465 East Bayshore Road, Palo Alto, CA 94303, (415) 856-4161, fax (415) 856-6134.

Organization tool

Binar Graphics shipped SkyScraper, a desktop manager for OS/2, in mid-December. SkyScraper creates a toolbar that sits at the bottom of the user monitor, allowing the user to assign OS/2 icons to the buttons. The product costs $99. Binar Graphics, 847 Sansome Street, Second Floor, San Francisco, CA 94111, (415) 986-0966, fax (415) 986-8270.

CAD for OS/2

Architects and engineers thinking of moving to OS/2 will be interested in IBM CAD/ONE from Altium, an IBM subsidiary. The first CAD software available for OS/2, CAD/ONE is described as easy enough for first-time users yet powerful enough for professional engineers. (Evidence to support this claim comes from Shawn Helman, a high school freshman who, using CAD/ONE, recently won the national prize in Computer Assisted Drafting-Mechanical in the Technology Students Association National Conference.)

CAD/ONE features include the flexible organization of geometry, associative dimensioning, and animated dimensions. The program's user-friendly features also include on-line help and a menu-driven interface. Altium, 1935 N. Buena Vista Street, Burbank, CA 91504, (818) 841-9470, fax (818) 840-8428.

OS/2 file transfers

Rightware Inc. has released its first product, LinkRight, a parallel port and serial port file transfer utility for OS/2. The product makes it possible to copy files to and from OS/2 and DOS while retaining extended attributes (EAs) and filenames. Since it is fully multithreaded, LinkRight allows the user to queue files while transfer is underway. Compression improves transfer rates and full logging is provided. Compatible with LapLink for DOS cables, LinkRight is the only file transfer utility native to OS/2. It is available in both command line and Presentation Manager versions. Rightware Inc., 1505 Villisca Terrace, Rockville, MD 20855, (301) 762-1151, fax (301) 762-1185.

NEWS

IDC acquires Blaise

Innovative Data Concepts (IDC) has acquired Blaise Computing and DeltaFile from Hyperkinetix Inc. IDC develops multi-platform software products and plans to release UpdateIt!, a multi-platform Change File development tool based on both acquisitions.

Award winner

OS/2 scored some points when *PC Magazine* named Accounting Vision/32, a native OS/2 product that also runs under Windows, an Editor's Choice product. Accounting Vision/32 is developed by Intellisoft out of Arlington, Texas. (817) 467-7243.

Global links

Globalink, Inc., has established a toll-free line for people needing to work on North American communications links—product literature and owner manual translations. The service is deemed particularly timely in view of the passage of NAFTA. Those calling the number, (800) 255-5660, can get advice on standardizing communication among English-speaking U.S. and Canadian residents, French-speaking Canadians, and Spanish-speaking Mexicans. Globalink's product, Power Translator, translates up to 20,000 words an hour.

Gupta, SQA in deal

Gupta and SQA have signed a marketing agreement in order to coordinate a marketing effort for SQA TeamTest. SQA, based in Woburn, MA, builds and sells GUI client/server automatic testing tools, such as SQA TeamTest.

Education donation

Rational Software has developed a program entitled Software Engineering for Educational Development (SEED) in which the company donates software to accredited educational institutions. The first system available is Rational Apex, an open-systems software-engineering environment for Ada. (408) 496-3600. ◆

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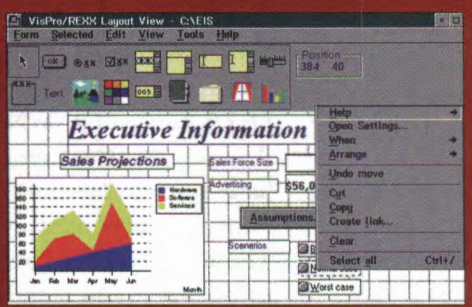

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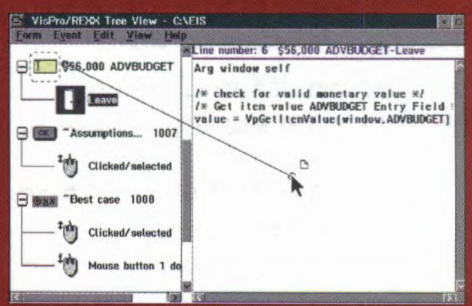

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Circle #84

OS/2 REXX Utility Extensions

BY TONY PEREIRA

Last month, we introduced REXX—a simple yet powerful programming language included in every copy of OS/2. IBM initially developed REXX as a programming language for the mainframe world, and later adopted it as the procedure language for its Systems Application Architecture (SAA).

Four operating systems fall under the IBM SAA umbrella: MVS and VM, which are mainframe systems, OS/400 for the AS/400 minicomputer, and OS/2 for microcomputers. Without much difficulty, you can port a REXX program written for one SAA system to another system that adheres to the SAA standard.

If REXX were only a cross-platform utility for mainframes, minicomputers, and PCs it would have little to offer beyond a few simple least-common-denominator commands (such as command line operation for simple management functions). While system management features such as subdirectories may seem a necessity to PC users, some of the larger systems have no such structures. Certainly, then, OS/2's graphics-oriented interface and object-oriented Workplace Shell would remain inaccessible in such an environment.

To tap this potential without sacrificing system compatibility, REXX adds external functions through **RexxUtil.** These OS/2-specific utilities extend the power of REXX within the OS/2 environment.

External Function Registration

You can add RexxUtil extensions to your REXX programs by registering the specific functions you intend to use. The **RxFuncAdd** built-in function registers each function:

Call RxFuncAdd ClearScreen, RexxUtil, SysCls

Despite appearances, this lengthy statement adds only one function. In this case, REXX retrieves **SysCls** from the RexxUtil(.dll) library and names it **ClearScreen.** Thereafter, any REXX program in your system may use **ClearScreen** until a program executes **RxFuncDrop** or until you reboot the system.

LISTING 1

Save this program as C:\REXX\DINFO.CMD. The program in Listing 2 will create a folder on the Workplace Shell desktop and create a program object representing the DINFO program file.

```
/* The initial, required comment */
/* Display Drive Information
   then Find and Display Hidden files*/
call RxFuncAdd 'SysLoadFuncs', 'RexxUtil', ,
              'sysLoadFuncs'
call SysLoadFuncs
call SysCls    /* Clear the screen */

AllDrives=SysDriveMap('C:', 'USED')
     /* Get string of all available drive ids */
drive.0=words(AllDrives)
     /* How many drives?*/
do i=1 to drive.0
   drive.i=word(AllDrives,i)
      /* Get each drive id */
   driveStats=SysDriveInfo(drive.i)
      /* Get statistics string for a drive */
   parse var driveStats id free total label
      /* extract each word from the string */
   say id 'Free='free 'Total='total 'Label='label
end
```

LISTING 2

```
do i=1 to drive.0
   rc=SysFileTree(drive.i'\*.*',fNames,,'**+**')
      /* Find hidden files in the root directory*/
   do j=1 to fNames.0
      /* file names are stored into fNames array */
      say fNames.j
         /* Display hidden file names & info */
   end /* do */
end /* do */
```

```
/* Sample Program: Create WorkPlace Shell Objects */
call RxFuncAdd 'SysLoadFuncs', 'RexxUtil', ,
     'sysLoadFuncs'
call SysLoadFuncs

/* Create a Folder & place it onto the Desktop */
IconName='FullyQualified.ICO'
     /* Replace FullyQualified.ICO with
        d:\path\YOUR.ICO */
call SysCreateObject 'WPFolder', ,
     'CodeCache^Folder', ,
     '<WP_DESKTOP>', ,
     'ICONVIEW=FLOWED,MINI,NOLINES;'|| ,
         /* Notebook Icon View Settings [Detail or
            Tree view]*/ ,
     'OBJECTID=<CodeCache_Folder>;'|| ,
         /* Always assign a unique Object ID */ ,
     'ICONFILE='IconName';' ,
         /* Optionally assign an .ICO file */ ,
     'U'  /* Update object if it already exists */

If result=1 then ,
     say 'Successfully created Code Cache Folder.'
   else say 'Folder Creation not Successful'

/* Now create a program object of our earlier
** Dinfo.CMD program.
** Place the program object into the folder
** just created */

ClassName='WPProgram'
          /* Class of a Program Object */
Title='Drive ^Info'
          /* Name to appear under ICON */
Location='<CodeCache_Folder>'
          /* Where to place new object */
          /* [can be path name or OBJECTID] */
progtype='PROGTYPE=WINDOWABLEVIO;'
          /* Other Progtype options include
          ** 'FULLSCREEN' 'PM' 'SEPARATEWIN'
          ** 'VDM' 'WIN' 'WINDOWEDWIN' */
Maxwindow='MAXIMIZED=YES;'
```

If you will be making extensive use of the OS/2 utility functions, a shortcut method will put the entire library at your disposal. First you must register a "special" function that registers all OS/2 Utility functions with a single call:

```
Call RxFuncAdd SysLoadFuncs, RexxUtil,
     SysLoadFuncs
```

Next, you must call **SysLoadFuncs** to register the other functions:

```
Call SysLoadFuncs
```

Now you can use any function in the RexxUtil library by its default name.

Calling Functions

You may have noticed that the sample code executes through Calls rather than through in-line instructions (as shown in the December installment). The choice is yours: you can invoke any REXX function through either a call or an in-line statement. With the in-line method, you assign the result code to a variable of your choice. In contrast, **Call** uses a variable named RESULT to hold the return value. Thus, the following two statements have the same effect:

```
RESULT = LINEIN('Config.Sys')
Call LINEIN 'Config.Sys'
```

Note the differences in syntax: to turn a **Call** into an in-line function, remove the parentheses and insert a space between the function name and the argument.

While your most basic **Call** instructions simply invoke functions, you will soon discover further uses such as executing a set of internal instructions or another REXX program. These *routines* end with a **Return** instruction, at which point processing resumes with the instruction following the **Call**.

Now that you have a full set of utilities and calling conventions at your disposal, you can move on to grander schemes: executing screen I/O and manipulating the cursor position; obtaining drive, file, and directory information; and creating and manipulating OS/2 objects and classes.

Execute Screen I/O

Since first impressions are lasting, you'll want to get your programs off to a good clean start. Wipe the screen clear of any residual effects through **SysCls()**.

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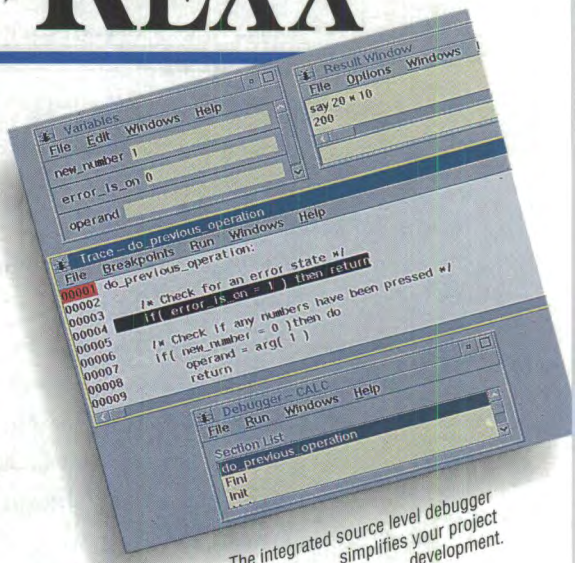

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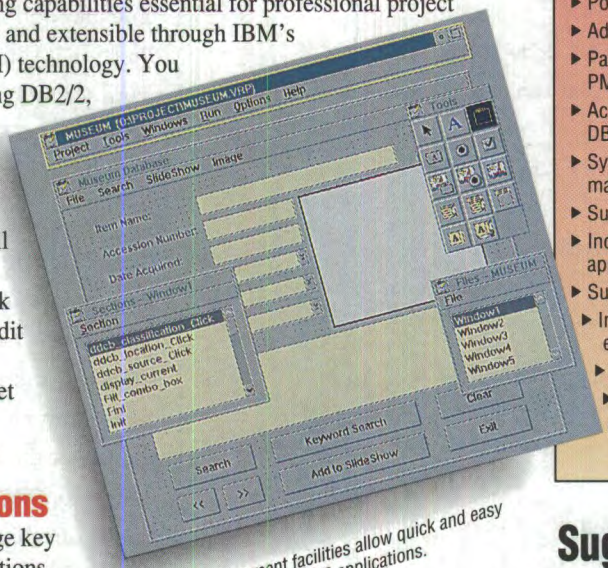

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```
          /* Should the window start as
          ** maximum size? */
CloseAtEnd='NOAUTOCLOSE=YES;'
          /* Should the Window stay open when
          ** the program ends? */
exeid='EXENAME=c:\rexx\dinfo.cmd;'
          /* Fully Qualified location
          ** of the Program */
Object='OBJECTID=<CC_DRIVES_CMD>;'
          /* Give it a unique object id */
icon='iconfile=d:\icons\qdrives.ico;'
          /* Fully Qualified Pathname of an ICON */
Setup=object||exeid||progtype||Maxwindow ,
     ||CloseAtEnd||icon
          /*Concatenate the variables into
          ** a WINCREATEOBJECT setup string */

rc=SysCreateObject(ClassName, Title, ,
                   Location, Setup, 'F')
If rc=1 then ,
     say 'Program Object in the Code Cache Folder'
  else say 'Program Object Creation not Successful'

/* Next create a Shadow of Config.sys for the folder */
title='Config.sys'
            /* Name of the Shadow Object */
objid='C:\CONFIG.SYS'
            /* Name of the original object */
loc='<CodeCache_Folder>'
            /* Where to place the shadow
            ** (OBJECTID's are case sensitive) */

result=SysCreateObject('WPShadow', title, loc, ,
                       'SHADOWID='objid, 'F')
If result=1 Then Say title' Object created'
    Else Say 'Not created, return code=' result

/* Next create a shadow of the DRIVES.CMD object & place on the
Desktop */
title='Drivestuff'
objid='<CC_DRIVES_CMD>'
loc='<WP_DESKTOP>'
            /* The objectid of the desktop */
```

With a clean slate, you have a full screen to command. Before writing text to the screen, you should position the cursor to a designated row and column with the following command:

```
OldPosition=SysCurPos(newRow, newCol)
```

OldPosition retains the cursor position before the move as two words in a single string variable (row col). The **Parse** instruction separates these two into independent variables (**Parse Value OldPosition With Row Col**).

The cursor tells the user where and when the program expects input. For simple information presentation, turn off the cursor with **SysCurState(OFF)**. Later, turn the cursor **ON** to resume input.

Typically, the program processes input through a **Pull** instruction (introduced last month). **Pull** waits for the user to hit the Enter key before passing data to the program. But sometimes, the program needs to see each keystroke as the user types. **Var=SysGetKey()** reads the next keystroke from the keyboard into the variable var. You may optionally add a **NOECHO** parameter to the function if you want to hide the characters (as in a password security routine).

Obtain Drive, File, and Directory Information

A second set of utility extensions map your disk drives, create and remove directories, search for files matching a specification, or find files having an imbedded character string. The code in Listing 1 displays the statistics for every disk partition on your system and then finds and displays all hidden files. Note the extra comma at the end of the **RxFuncAdd** line—REXX uses a terminating comma as a line continuation mark. Thus, **'sysLoadFuncs'** becomes part of the preceding line.

The listing features three OS/2 Utility functions: **SysDriveMap, SysFileInfo,** and **SysFileTree**. **SysDriveMap** passes a string of the drive IDs on your system. Like the row and column parameters returned by **SysCurPos, SysDriveMap** lists the drive IDs with spaces between each letter. The standard REXX **Word** instruction individually extracts each letter. Then **SysDriveInfo** uses the letter to return the drive statistics to a string formatted as four words. Here, the **Parse var** instruction extracts each word into a separate

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```
result=SysCreateObject('WPShadow', title, loc, ,
                       'SHADOWID='objid, 'F')
If result=1 Then Say title' Object created'
     Else Say 'Not created, return code='result

Say 'Do you want to destroy the folder we just created?'
Say 'Answer Y or N  (case sensitive)'
answer=SysGetKey(ECHO)
       /* This does return upper-/lower-
       ** case characters */
If answer='Y' then ,
      retc=SysDestroyObject('<CodeCache_Folder>')
If retc=1 then say ' - Destroyed CodeCache Folder!'
     else say 'Not Destroyed!'

Exit
```

variable for display through **Say**.

While the **SysFileTree** function has many uses, within Listing 1, it searches the root directory of each drive for hidden files. The function returns the data as an array (also known as a stem variable). The **fName.0** entry contains the number of files found, while each subsequent entry (**fName.*n***) holds statistics about each file found. I encourage you to try other search combinations for **SysFileTree** and to explore the other OS/2 Utility drive and file functions: **SysFileSearch, SysFileDelete, SysMkDir, SysRmDir,** and **SysTempFileName**.

Create and Manipulate OS/2 Objects and Classes

Thus far, our examples include operations common to general PC-based computing: basic input, output, and file management. REXX also features a powerful set of functions that access OS/2's Workplace Shell and head into object-oriented territory. Using just three functions: **SysCreateObject, SysSetObjectData,** and **SysDe-**

stroyObject, your programs can create, modify, and remove objects on your desktop such as folders, program objects, and shadows, along with several key parameters that affect the object.

The program in Listing 2 creates a folder, adds a program object to the new folder, adds a shadow object to the folder, and finally adds a shadow of the program object to the desktop. Before exiting, the program gives you a chance to remove this new addition to your work environment.

The syntax of the object management functions is more complex than the more basic functions we've covered. While browsing through the listing, refer to Tables 1a, 1b, and 1c for a complete description of the syntax for these commands.

By this time, you should have enough skills to read the code without much further explanation. There are, however, two new conventions you should note: the use of extra commas (to continue lines) and the concatenation symbol || which combines several parameters (such as ICONVIEW, OBJECTID, and ICONFILE) into a single setup string.

You should also study the following features: the PROGTYPE parameter, string concatenation, and case sensitivity for some of the names and input procedures.

The PROGTYPE parameter specifies what type of session should be started when this program object is invoked. The sample code uses an OS/2 Windowed command prompt window (WINDOWABLEVIO). Other choices for OS/2 programs include 'FULLSCREEN' or 'PM'. REXX will just as happily start DOS character-based applications in full-screen mode by specifying 'VDM' , or windowed mode using 'WINDOWED-VDM'. Likewise, DOS/Windows programs can run in a full-screen WIN-OS2 session 'WIN', a windowed (seamless) WIN-OS2 session 'WINDOWEDWIN', or a seamless WIN-OS2 session that is running in a separate Virtual DOS Machine 'SEPARATEWIN'.

While you may concatenate several variables (as demonstrated throughout Listing 2), bear in mind that the REXX utilities are not very forgiving with setup string syntax. Exercise care and always check the result variable (which returns 1 for success or 0 for failure).

TABLE 1a

```
result = SysCreateObject(classname, title,
      location, setup, dupFlag)
```

classname—OS/2's WorkPlace has many predefined object classes. The three classes needed to create folder, program, and shadow objects are: **WPFolder, WPProgram,** and **WPShadow.**

title—The name that will appear under the object's icon on your screen. It may contain blanks and have multiple lines (indicate the end of a line **with the** ^ character).

location—Specify an explicit location such as **C:\OS2\SAMPLE.OBJ** or a location on the Workplace Shell Desktop. Several locations have predefined names for the desktop such as **<WP_DESKTOP>, <WP_START>, <WP_DRIVES>.** Respectively, these specify the Desktop itself, the StartUp folder, and the Drives folder. You may also use container object names, as specified in the **OBJECTID=parameter** of the setup string during container object creation.

setup string—An optional setup string for the Presentation Manager **WinCreateObject** function (a complete discussion of **WinCreateObject** can be found in IBM's PM Programming Reference, Volume II). The string consists of none to several fields separated by semicolons and ending with a semicolon. The fields all have the format **KEYWORD=value;** where there are keywords and values that correspond to almost every value, check box, and button that can be set manually through an object's settings notebook. (See Table 2 for a brief description.)

For example, set an object's icon with **ICONFILE='name.ICO'. PROGTYPE=SEPARATEWIN** sets the session type to a Win- OS/2 window running in a separate session. You should always include **OBJECTID=name**—it assigns a unique name to the object being created. Several keyword examples appear in Listing 2.

dupFlag—Indicate the action if the object already exists. Specify **'F'** to fail if the object exists, **'R'** to replace the object, or **'U'** to update the object (F is the default).

result—This is the value returned by the function call, either **1** (success) or **0** (not successful).

You must also keep an eye out for case sensitivity. For example, OBJECTID sees "Icon" and "icon" as two distinct names. Likewise, the **SysGetKey** REXX Utility function returns exactly the character pressed, and it is case sensitive. The program checks for an uppercase Y before issuing the **SysDestroyObject**—if you type a lowercase y, the objects will remain intact.

Summary

The REXX Utility functions provide a rich set of extensions to your programs. As you add new features to your programs, look through the on-line REXX documentation for additional instructions and examples. In the next installment we'll pass OS/2 commands from the REXX program to the current Command processor, and use the REXX External Queue (RXQUEUE) for capturing and processing the output of those OS/2 commands. ◆

Tony Pereira is president of his consulting firm, Clear & Simple, Inc. He is an active OS/2 developer, educator, consultant, and entrepreneur. His popular OS/2 product "PERFORMANCE 2.1—A Tuning Kit for OS/2" was written in REXX.

TABLE 1b

```
result = SysSetObjectData(name, SetupString)
```

name—Either the **OBJECTID** name specified during object creation, or the fully qualified path and name of the object.

SetupString is a **WinCreateObject** setup string as described above for **SysCreateObject.** Only the specific values coded are changed.

The value returned in result is either **1** (success) or **0** (not successful).

TABLE 1c

```
result = SysDestroyObject(name)
```

name—The sole parameter which specifies either the **OBJECTID** name assigned at object creation or the fully qualified path and name of the object. Use caution with this function! If used on a folder the function deletes not only the folder, but any subdirectories or contents within a folder. Since the Desktop is an object, it can be destroyed with this function. A result of 1 indicates success.

Table 2

OS/2 REXX PART II - OS/2 Utility Extensions

WinCreateObject SETUP String Parameters Table

e.g.Setup='Iconfile=c:\icons\any.ico;ObjectID=<Some_Unique_Name>;ConcurrentView =NO;'

General Object Keywords	Possible Values	Description
Concurrent View	YES or NO	Create a new object when opened or resurface the existing object
IconFile	'd:\path\file.ICO'	Assign an icon to the object
IconPos	x,y	Position of the Icon in a folder
MinWin	HIDE or VIEWER or DESKTOP	View when minimized
NoCopy	YES or **NO**	Object can not or **can** be copied
NoDelete	YES or **NO**	Object can not or **can** be deleted
NoDrag	YES or **NO**	Object can not or **can** be dragged
NoMove	YES or **NO**	Object can not or **can** be moved
NoPrint	YES or **NO**	Object can not or **can** be printed
NoRename	YES or **NO**	Object can not or **can** be renamed
NoShadow	YES or **NO**	Object can not or **can** have a shadow
NotVisible	YES or **NO**	Object is not or **is** visible
ObjectID	<Name> Specify a unique case sensitive name inside the characters < >	Assigns a name to the object that is known system wide and can be referenced by other routines.
Open	SETTINGS or DEFAULT	When opening the object - open the settings notebook or the default view
Template	YES or **NO**	Set the object as a template
ViewButton	HIDE or MINIMIZE	Hide button or Minimize button

Program Object Keywords	Possible Values	Description
AssocType	filetype	Assoicates filetype with this program
ExeName	'd:\path\name.exe'	Fully qualified program name (may be .EXE, .COM, .CMD, or .BAT)
Parameters	parameters	Valid parameter lists for the program
ProgType	for OS/2 - 'WINDOWABLEVIO' or 'FULLSCREEN' or 'PM' for DOS - 'WINDOWEDVDM' or 'VDM' for Windows - 'WINDOWEDWIN' or 'WIN' or 'SEPARATEWIN'	OS/2 Window or Fullscreen Command Prompt or PM Window, Dos Window or Fullscreen Cmd Prompt, WIN-OS2 Seamless Window or Fullscreen Window session or Single Seamless Session
NoAutoClose	**YES** or NO	Leave window open or closed at program end
StartUpDir	'd:\path\path'	Fully qualified path name

Folder Object Keywords	Possible Values	Description
IconView	Format & Display Type (see below)	separated by commas
DetailsView	Format & Display Type	separated by commas
TreeView	Format & Display Type	separated by commas
(Format & Display Type) (for above)	'FLOWED' 'NONFLOWED' 'NON-GRID' 'NORMAL' 'MINI' 'INVISIBLE' 'LINES' 'NOLINES'	
Background	'filename.bmp'	Set folder background to bitmap found in \OS2\BITMAP directory

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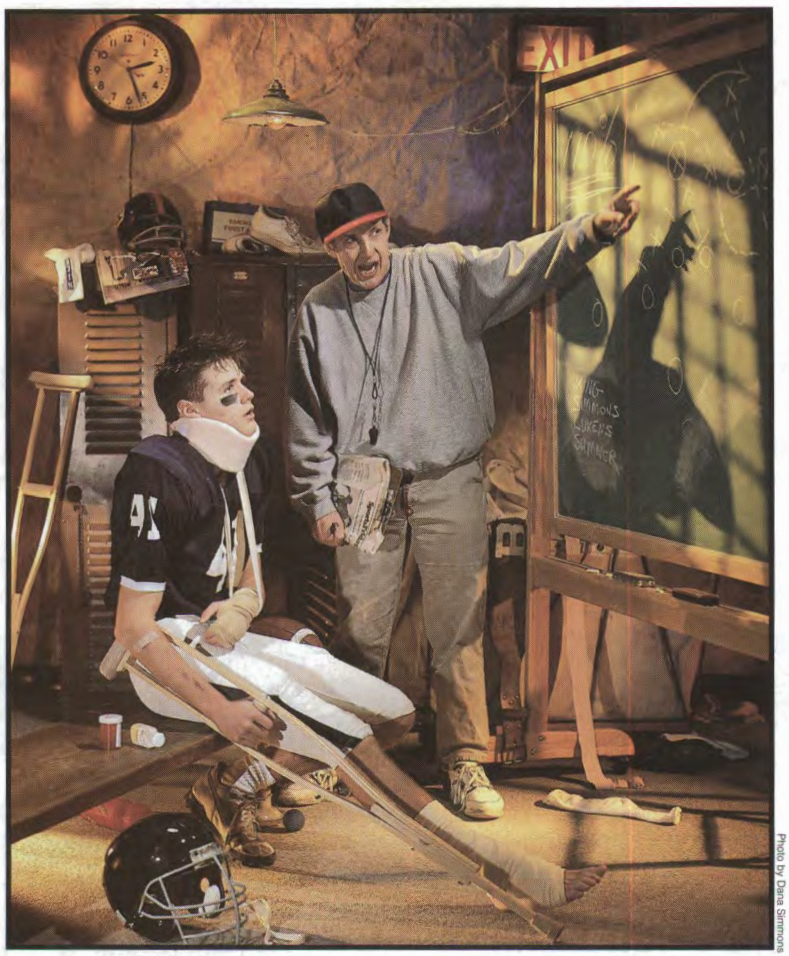

Photo by Dana Simmons

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Circle #142

TIPS AND TECHNIQUES

BY GORDON SCOTT

If on occasion you feel as though your luck with computers is best described by Murphy's Law, this month's Tips and Techniques are for you.

I once visited with a friend who had a box of 48 diskettes sitting next to his computer. As we sat in his office discussing things, his system would beep about every 10 minutes. His response to this beep was to change the diskette in his floppy drive and press the Enter key. He seemed to do this reflexively, without even breaking his conversation.

I asked him what he was doing and he explained to me that he had written a program that would automatically back up certain files every 10 minutes. He simply put a new disk in each time the computer beeped. The box of diskettes represented the past eight hours of work in 10-minute intervals.

Since this seemed extreme to me, I asked if he thought the time he spent shuffling disks inhibited productivity. He replied that he worked with a steady flow of data that was constantly updated. He needed multiple time slices of this data that could be conveniently passed from one person to another. Keeping the data on diskette was a practical solution in his mind. "Besides," he said, "the best defense against Murphy's Law is the Boy Scout motto: 'Be Prepared.'"

With OS/2, you have a variety of different methods to safeguard your system against unexpected problems. The following tips and techniques will prepare you against unwanted mishaps. (None of them include shuffling disks.)

To recover a previous desktop arrangement, reboot without performing a shutdown.

How to do it:

- Reboot your computer with Ctrl+Alt+Del without using shutdown first.

What this buys you: A recovery of previous desktop settings.

When you turn off your computer, you should (under normal circumstances) perform a shutdown first. But there is an exception, a situation in which a proper shutdown is the *wrong* thing to do.

If you use OS/2's default style of icon arrangement (called "non-grid," which means you can put your icons anywhere you want on the desktop), you leave yourself vulnerable to a minor mishap. This small disaster can strike when you invoke the desktop's pop-up menu. Why? Because the menu routinely pops up with the mouse pointer positioned next to the **Arrange** option. An inadvertent click of the left mouse button at that moment can activate the arrange feature, causing unwanted results—all of your icons will line up in left-to-right rows. When you have icons optimally placed for the tasks you do most, it can be time-consuming to recreate that arrangement.

As one of its tasks, **Shutdown** saves the icon and window positions of your current desktop to OS.INI. If you reboot your computer without using the **Shutdown** option on the Desktop pop-up menu, OS/2 will use your previous OS2.INI information to create the desktop, and you'll recover from a rather unpleasant predicament.

Create an automatic method of preserving your *.ini files.

How to do it:

- Create a batch file named BK.CMD using copy commands similar to these:

```
copy c:\os2\os2.ini c:\os2\
  os2.bak
copy c:\os2\os2sys.ini c:\os2\
  os2sys.bak
copy c:\os2\mdos\winos2\win.ini
  c:\os2\mdos\winos2\win.bak
copy c:\os2\mdos\winos2\system
  .ini c:\os2\mdos\winos2\
  system.bak
```

- Tear off a program object from the Program template in the Templates folder, and place it somewhere on the desktop.
- In the settings notebook for this object, Enter BK.CMD in the Program Name field.
- Close the notebook.
- Place the new program object, or a shadow of it, in the STARTUP folder.

What this buys you: routine recovery precautions.

This batch file makes regular backup copies of four critical files. By placing a shadow of the program in the startup folder, these files will automatically back up when you boot your computer. If a problem occurs, you have a recent copy of these critical files for quick recovery. If there are other files specific to your system that you'd like to copy every day without thinking about it, you can easily add a COPY command for such files to BK.CMD.

Create a desktop object that allows you to keep constant watch on the SWAPPER.DAT file's size.

How to do it:

- Locate the SWAPPER.DAT file. (You can use the Seek and Scan files tool in the Productivity folder to search all drives at once and find where the file is located.)
- From the Drives folder, double-click on the icon for the drive where the SWAPPER.DAT file is located.
- Using the right mouse button, select the folder (subdirectory) where SWAPPER.DAT is located.
- Hold down the Ctrl key, Shift key, and the right mouse button while dragging this icon to an open spot on the desktop (or other folder) to create a shadow of the folder that contains the SWAPPER.DAT file.
- Open the Settings Notebook for this folder.
- Select the **Menu** tab.
- Select **~Open** in the Available menus

list box, and then select the **Settings...** pushbutton.
- Select the downward arrow in the **Default action** field.
- Select the **Details view** item in the drop down list.
- Select the **OK** pushbutton.
- Select the **Include** tab of the Settings notebook.
- Enter *.dat in the Name entry field.
- Close the Settings Notebook.
- Double-click on the folder shadow you created on the desktop.

What this buys you: Early warning of oversized SWAPPER.DAT.

The SWAPPER.DAT file is OS/2's private storage balloon. It expands and contracts to balance the memory storage needs of your system. It provides some important benefits to OS/2 users. If your programs run out of room in your system's RAM, OS/2 temporarily shuffles some of the data you aren't using at the moment into the SWAPPER.DAT file.

This is generally a good thing. It allows you to keep working like you had all the room in the world—or at least all the room on your hard drive.

If your SWAPPER.DAT file inflates enough to fill up the remaining space on your hard drive, OS/2 sends you an ugly message which includes the words: "...data will be lost!" The message indicates that there is no room left on your hard drive in the partition where the SWAPPER.DAT file is located, and OS/2 is having trouble finding room to store data. As a result, data may soon be lost in the shuffle.

Fortunately, OS/2 tries to warn you before it runs out of room. By default, this warning comes when less than 2MB of disk space remains. You can check the limit on your system by looking for a statement like SWAPPATH=D:\TEMP 2048 1024 in your CONFIG.SYS file. The second parameter (2048 in the example) is the warning limit in KB.

If you think you are close to exceeding your hard drive's capacity, knowing the SWAPPER.DAT file's size will help you monitor just how closely you're pushing the limits. Then you can gracefully exit a program if necessary. With this tip you can get a quick look at the file's size by simply double-clicking on the icon, or restoring it from a minimized state.

Enable OS/2's undelete capability.

How to do it:
- Create a directory named DELETE, on each partition on your hard drive. (It may already exist; OS/2 creates one by

default on your boot drive at installation.)

- Edit your CONFIG.SYS file to place in it a line similar to this:

```
SET DELDIR=C:\DELETE,1024;
  D:\DELETE,1024;
```

A similar statement may already exist in your CONFIG.SYS with REM in front of it—OS/2 installs the CONFIG.SYS with this statement at installation. You must remove REM to activate the feature.

- Create a DELETE directory on each partition that does not already have one.
- Shutdown and reboot.

What this buys you: The ability to recover files you have accidentally deleted.

To use the undelete command, type the following at an OS/2 command prompt: UNDELETE *.* /L. This will list all files in the current directory available for recovery. To recover a file simply enter: UNDELETE *filename*.

Here's how undelete works: the SET DELDIR statement in your CONFIG.SYS file specifies the partitions on which you can recover deleted files. You must specify an existing directory (undelete will not create it for you). Every time the system deletes a file from one of the drives, OS/2 copies it into the directory you specify in the SET DELDIR statement and marks it as a hidden file.

The number you specify in the statement is the maximum size of the files you can have available for recovery. (In this example, the maximum size is about 1 meg.) If the size of your files exceeds the limit, OS/2 will delete the oldest files to bring the combined file sizes within the limit.

Upon installation, OS/2 puts this statement in your CONFIG.SYS, but puts the remark indicator (REM) in front of the line. Because the undelete feature can use significant space on your hard drive, it is not enabled by default.

Set OS/2 to run CHKDSK (check disk) automatically whenever the system shuts down abnormally.

How to do it:

- Add this statement to your CONFIG.SYS file:

```
DISKCACHE=256,LW,AC:CD
```

NOTE: C and D represent two partitions on the hard drive. You should modify the statement to specify a letter for each corresponding partition on your hard drive(s).

What this buys you: Automatic recovery of data fragments created by turning off the computer or rebooting without performing the shutdown procedure.

TIPS AND TECHNIQUES

This DISKCACHE statement in your CONFIG.SYS file allocates 256KB as a cache for frequently used data, thus improving the responsiveness of your disk drive. You may already have the first part of this statement in your CONFIG.SYS file, but adding AC:C (or CD for two partitions, CDE for three, and so forth) sets OS/2 to check (AC) for data errors automatically before booting up. This gives the system time to fix possible damage to extended attributes that might not have been properly collected when the system powered down or rebooted. ◆

Gordon Scott writes online help and tutorials for OS/2 applications at IBM's Santa Teresa Laboratory in San Jose, California. Share your tips with readers by sending them through the Internet to gscott@stlvm22.vnet.ibm.com. Gordon Scott can also be reached normal business hours at (408) 463-4483.

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Supporting the network

Why is there no standard network support in the base product of OS/2? Some network support should be standard like in Unix, Workgroups, and NT. Why not OS/2? Without network support for the DOS sessions under OS/2, it can never be a better DOS than DOS.

John Lopez
via MCI Mail

Keeping competitive

I've read letters to the editor in various magazines from people who don't think that Windows NT will be (or should be) widespread. I hope that it becomes popular, even though I use OS/2 and have no real interest in NT. If it wasn't for DR-DOS, people would probably still be using MS-DOS 4.01. By the same token, if it wasn't for Windows, OS/2 1.3 would probably be the newest version available. The more popular Windows (3.1 and NT) becomes, the harder IBM will try to stay ahead. This can only mean that OS/2 will get better.

It seems that in almost every issue of *OS/2 Professional* there is a letter or two from someone who tried to install OS/2 but wasn't able to because of compatibility problems or lack of device drivers. When I first tried to install OS/2 2.0 I also had several problems. I put a message on Compuserve and called IBM's hot line. I soon found a solution to the problem and I'm glad I didn't get discouraged about the problem. OS/2 was worth the effort it took to install it. When I installed 2.1 I had no problems with installation. Don't give up too early; it's worth the effort.

Paul Gibbon
Duncanville, Texas

SOM more

I enjoyed Rich Malloy's article on SOM [Feature, October]. Two key points I agree with Rich need reiteration and two drawbacks are worth mentioning:

1. If you think the applets are not SOM Compliant, then it should be no surprise that Dynamic Data Exchange, which has been in OS/2 since v1.1, was not used in earlier versions of the applets. IBM's track record in doing application integration APIs is weak.

2. That IBM wants a run-time license for SOM2/DSOM is not unusual. IBM management still tends to think their technology is so good, customers will pay a premium to use it. That faulty reasoning is why customers continue to use DARPA TCP/IP instead of IBM APPN for core enterprise networking.

The competition is not convinced, either: Microsoft's OLE, Sun Microsystems' ToolTalk, Next's Portable-Distributed Objects (PDO), Apple's Publish/Subscribe, provide this functionality (distributed object-oriented messaging) more or less for free with every purchase of their respective OSs.

Two other drawbacks to SOM:

1. No mention of CORBA was made. If one is going to do messaging, one should look for standards. SOM is not part of CORBA yet.

2. SOM1/Workplace Shell (WPS) programs run in the same process space as WPS. If you crash your SOM1 program, you crash WPS. I hope this has changed; it is no fun to crash your desktop! The one-tenth-second rule and PM's ability to protect itself against errant applications is nil.

Mike MacFaden
Palo Alto, California

Workplace OS

I would like to thank *OS/2 Professional* for William Zachmann's mouthwatering column on the Mach Unix microkernel architecture [Zachmann's View, October] that IBM plans to build its object-oriented and portable version of OS/2 around. Wow! An object-oriented OS built on top of Mach? What a great idea! I can't wait to taste it! In fact, I wish that I could buy it today.

I am pleased that IBM is forging ahead with the next step in OS technology. I'm tickled that they are consistently trying to be the first one there, instead of the next one there. I wonder who will be next. Maybe Cairo will be next. Perhaps the Taligent OS will be next.

I think you see where I'm going with this. Zachmann writes that the Workplace OS will be IBM's next step in OS technology. Damn straight it's the neXTStep in OS technology—I'm running it on my desk right now. And, man, is it sweet!

Pohl Longsine
Lincoln, Nebraska

Reader information, please

First of all, thanks! I enjoy the magazine—feeling good about seeing OS/2 grow.

I have been a user since the first OS/2 version came out, currently registered as a 2.0 user. In a letter by Rev. Frederick Pompei [November], he refers to two offerings I am curious about, an OS/2 maintenance update for $24.95 and the OS/2 2.1 offer for $60. I have never received offers like that and wonder if I might be missing something. Would you know if all registered owners would receive these or are there conditions?

I noticed on "PC DIRECT" that OS/2 2.1 was offered at a discount for DOS users. Do you know of any offers (past or present) for upgrade from 2.0? I would appreciate it if you could shed any light on this or if you could refer me to any specific source of info on this. Keep up the good work.

Rene Rigouby
Rockville, Maryland

[Editor's Note: IBM offered a $30 rebate to purchasers of 2.1 who had previously bought 2.0. However, the offer expired 9/14/93.]

What price an upgrade?

I am a registered OS/2 2.0 user. However, when I found that OS/2 v2.1 would cost me exactly the same as if I had never purchased OS/2 before, I decided to never purchase or use another IBM product. If only I could get some refund on the money I spent so far.

Jim Finucan
Annandale, Virginia

OS/2 at home

I am a rogue. I use OS/2 at home.

There are some things, however, that keep dual boot on my system. 32k drivers for my Paradise chipset; I know they're out there. (How about a New Driver list, Ed?)

Peer to Peer networking. About once a week, I'm tempted to put Windows for Workgroups back on my machines. (Too many devices for just one box). PC Tools for OS/2! I just feel naked without it. (Give me a beta, I promise I'll use it!)

Last, but still important, LINKS for OS/2! Mr. Developer, don't forsake the home user. There's more of us than you might think.

Brett Hetherington
Denver, Colorado

Letters to IBM

A year ago I bought OS/2 2.0 after waiting two years for it and was pretty happy with OS/2 2.0. However, I need Windows 3.1 support. Somewhere down the wire I heard about the 2.1 beta program with a Win 3.1 module. I called the number and while signing up I asked if I could receive a copy of the 2.1 beta program with the Windows 3.1 module when it ships. The fellow told me that it is general practice for the 2.0 betas. After a couple of months with the beta 2.1, I figured that my 20-odd 2.0 disks had better uses than to hold my old operating system, so I used them for back-ups, safety copies, coasters, etc.

When OS/2 2.1 came out and no product showed up, I called IBM. I got passed around to 10 different phone numbers. The final outcome: They should never have told me beta testers received a freebie and, by the way, my license on the beta of 2.1 is expired because it is shipping. When I explained that that basically left me with DOS they said that if I could find my 2.0 receipt (I can't, can you?) they would send me another copy of 2.0!

I've since gone back to school and cannot/will not afford 2.1. I will not go back to 2.0 . So I am using the 2.1 beta, I am unhappy, and I will sleep with the lights on.

Johann B. Kemsuzian
Fairfield, Ohio

I have just finished reading the Input section of the October 1993 issue of *OS/2 Professional* and could not agree more with writers Gaines, Day, Dindore, Gilbraith, and Voitel describing their experiences with OS/2. Specifically, what I don't like about OS/2:

1. It takes too long to boot.
2. You can't make a bootable system disk on a floppy like you can in DOS.
3. You can't do a CHKDSK without going through the first part of the installation process.
4. Tweaking the CONFIG.SYS and AUTOEXEC.BAT is too complex. (Why do we still need these files anyway?)

I finally removed OS/2 from my system. IBM claims they have fixed most of the problems with version 2.1, but they want us to pay $99 more to upgrade. Well, I have news for IBM—they will have to give me a version 2.1 free and pay me $99 to install it; otherwise, there is no way I am going to put up with that nonsense again. IBM, wake up! Microsoft is going to win the OS war!

D. R. Cool
Huber Heights, Ohio

First of all, I want to tell you how pleased I am with your magazine. It's very informative and a good resource for trying to muddle my way through OS/2.

I use many different OSs and DOS-shells-with-egos (like Windows), and OS/2 is definitely technically the best. The user interface still has a few rough edges, but hey, that will get worked out. It's no NeXT.

I do have a few questions for IBM, though, and a few suggestions.

First suggestion: Steal Apple's marketing team. If they could sell a 128K Mac, and a hellishly buggy Newton, think of what they could do for OS/2!

Question: At work, we just bought a bunch of PS/ValuePoint 486s. I turned it on, and I found—DOS. Why? Isn't OS/2 good enough to pre-install? Doesn't IBM trust it enough to put it on all capable machines? Walk into a store and buy a clone, and you'll get Windows and DOS pre-installed. Oh, did I mention that in the box with the ValuePoint I found a copy of Windows 3.1? Nearly fainted.

Suggestion: CHEAP UPGRADES! The only reason why I still have 2.0 on my hard drive is I can't afford the upgrade to 2.1! I'll give you the disks, IBM. I don't care. I can get lots of those. I just want the software.

Question: Why is the installation manual the thickest manual in the entire set? And is it in English?

Resulting Suggestion: Buy a Mac. Read the manual. Take notes. That is how a manual should be written. Skip technical crap and put it in an appendix. That way it stays out of the way of Joe User, and the propeller-heads can still find it if they want to.

Question: I happened by the local IBM office, and noticed that although there were PS/whatevers sitting around with OS/2 on display, the administration people used DOS/Windows! That's like Apple buying a whole bunch of IBM clones and running DOS. Again, why?

IBM is sitting on one of the best pieces of software of the 90s. Wake up!

Anyway, enough of that. Keep up the good work, guys...and seeing John Dvorak again would be nice.

Jurgen Schaub
Vancouver, BC Canada.

Small pix will do

Congrats on starting and keeping going (and growing) *OS/2 Professional.* I have enjoyed receiving it. I thought I'd convey to you my thoughts on your latest issue, for what they are worth. Overall I liked it. However, here are a couple of suggestions.

1. There is little reason to "waste" a whole page for photos of the individuals you write about. Most of them are of interest for their views/intellectual contributions and a small picture would well serve my curiosity/interest! (In fact, if one were to have "extra space" to fill, we can surely think of far "prettier" subjects!)

2. Some of the earlier Tips and Techniques materials were great. We sure could use such materials more and

really do with a lot less of interviews and opinions, unless they are of "movers and shakers" in the field.

Dr. K. Ramakrishnan
Vermillion, South Dakota

Art attack

I use OS/2 2.1 on my home computer and am impressed with it. I enjoy receiving *OS/2 Professional*. I want and need the information. My problem with *OS/2 Professional* is its art direction, which is sorely lacking. Preparing to write this letter, I notice that the editor's last name and the art director's last name are the same, which gives me some pause.

Art direction is like tailoring or automobile body design. A homemade job sticks out like the proverbial sore thumb. To put it succinctly, *OS/2 Professional* NEEDS an art director who knows what he/she is doing. Engaging someone to handle art direction should be priority. The magazine is just this side of unreadable as it stands. Take a look at the cover of the October 1993 issue and tell me that I'm wrong.

Please take my advice. I like OS/2 and I like the information in the magazine. You need to make some cosmetic changes to better convey your message and advertising.

Michael Wagner
Costa Mesa, California

[Susan Levine, Assistant Art Director, responds. You're right...art direction is like tailoring or auto design—and just like your examples there are completely different directions each can take—one would hardly confuse a Brooks Bros. suit with an Armani or a Corvette with a Volvo, or The New Yorker with Life magazine for that matter. In other words, it's a matter of focus, skill, and taste, and in this, sir, we differ. OS/2 Professional's art department strives mightily to make the magazine eminently readable and elegant, combining high-tech and hand-crafted design. We are always open to constructive cricitism and support from every member of our staff and readership. While I can appreciate your criticism it would have been more challenging if your criticism had some concrete suggestions too.

As to the similarity in the last names of the Publisher and Art Director—marriage should not preclude talented people from working together. Elizabeth Black has close to 20 years of experience in all facets of magazine publication. I'd put her resume up against art directors anywhere in the country, and I'm not even related.]

New department?

I have read the September 1993 and October 1993 issues of *OS/2 Professional* and consider the time well spent.

May I suggest that you consider an additional "Department" or section for the publication. You might call it: OS/2 STATUS and include information such as: current OS/2 version number, first ship date of current version, list price of

current version (single user), lowest street price (single user), competitive upgrade available (yes/no), competitive upgrade list price (single user), number of copies current version sold/installed (actual/estimated)/(actual/estimated), maintenance available/recommended for current version (yes or no/yes or no), anticipated next version number (2.2? 3.0?), anticipated next version ship date (Q1 94?), anticipated next version new features, beta release planned/available (ship date), currently shipping OS/2 application version numbers (with company name and contact telephone number), announced OS/2 application versions (target ship date, with company name and contact telephone number).

Obviously one of the publication's objectives is to promote the OS/2 environment and the above information would help to do that. The OS/2 applications section might turn out to be rather long and a little hard to manage, particularly as the application base expands, but the rest should be relatively straight-forward. It is my view that many of us OS/2 users would like to keep track of the status of OS/2 and OS/2 products, especially regarding the next release of OS/2 itself. Presumably the OS/2 development team isn't sitting on their hands. Do we know what their objectives are, and their target dates?

Also, I may have the wrong idea, but I think you will find that more people will be willing to pay for a subscription to the publication as the help/hints/techniques content increases. You might consider producing a by-product publication (or series or diskettes) once a year consolidating all the current material of this type. Continued success to you and your associates!

Robert D. Pound
Calgary, Alberta, Canada

Share the wealth

I have been using OS/2 2.1 since it was released and have had an experience that I thought might be of interest to those other OS/2 warriors out there who might be thinking they are alone in fighting this battle.

At the time of OS/2 2.1 general availability, my system included a Mylex NME-486 33mhz EISA motherboard with 16 megs of RAM, a Future Domain TMC-860 SCSI host adaptor with one Quantum 245mb hard disk, and a Cardinal video card with 1 meg of memory. In addition, I had a Microsoft serial mouse connected to the mouse port on the motherboard, a 1.44mb 3.5-inch floppy as a drive A, and a 1.2mb 5.25-inch for drive B.

On initial installation, I found that my mouse would not work with OS/2. It worked fine with DOS/Windows and I liked it since it used IRQ_12

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Doing Business on the Internet:

How the Electronic Highway is Transforming American Companies

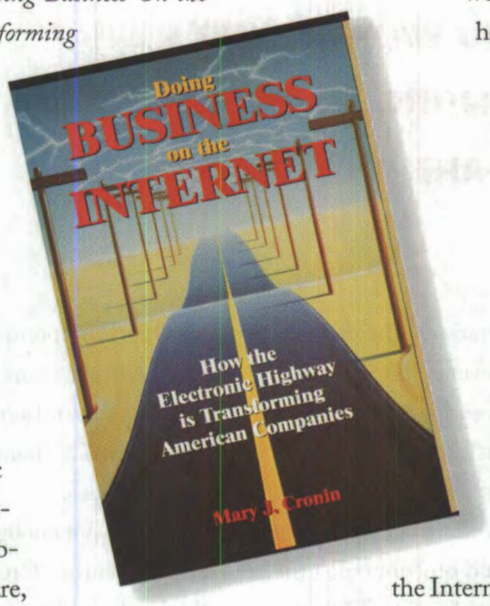
by Mary Cronin, Van Nostrand Reinhold, $29.95

REVIEWED BY MARK MINASI

"Companies that have no presence [on the Internet] will quickly fade from view."—Christopher Locke, writing in the *1993 Internet Business Journal.*

A strong statement, indeed. The *Internet*? Isn't that where the cyberspace hackers and university geeks hang out? What does the Internet have to do with business?

The Internet has everything to do with business, says Mary Cronin, author of the new book *Doing Business On the Internet: How the Electronic Highway is Transforming American Companies*. In fact, the Locke quote opens the book's second chapter.



The Internet is a network of networks, an interstate (and international) highway system for computer data that includes nearly a hundred countries (and it could be more than 100 by the time you read this—it really grows that quickly) and encompasses three million computers. On it, you'll find 25 million users of electronic mail (drop me a note, for example, by addressing it to *mminasi@access.digex.net*), tons of public domain and shareware computer software, and news discussion groups on everything from romance languages to rutabaga farming to rat catching. It's a vast source of information, both the frivolous and the essential.

But until recently, it's not been a place where you'd find businesses. As most of the carrying capacity of the Internet was funded by the U.S. government, it wasn't kosher to use the Internet for commercial purposes; in fact, there is an Internet Acceptable Use Policy that basically says, "Keep the commercial traffic off our government lines." However, government lines aren't the only ones on the Internet. Several private firms, like the Commercial Internet Exchange (CIX) and Performance Systems International (PSI), now offer commercial, restriction-free access to the Internet.

This service is fairly new, which is why it's not surprising that most businesses aren't using the Internet yet. Some firms, however, *are* using the Internet as a powerful strategic business weapon—and Mary Cronin's book details how.

In order to find out what businesses are doing on the Internet, Cronin interviewed 65 firms that indicated (via the Internet, naturally) that they'd speak with her. The results are quite interesting. If you're looking for details on TCP/IP window sizes or where to go in order to buy the best implementation of PPP, though, then this isn't the book for you—Cronin avoids most of the techie stuff. This is aimed at middle and upper management types who have heard that there's something called the Internet, and that it would be good for their companies to get on this Internet, but they aren't quite sure of much else in that realm.

The book's second chapter, "A Manager's Guide to the Internet," provides a simple overview of the Internet's components, roughly how much it would cost to join the Internet, and what to consider when finding an Internet service provider. Then, there are examples of things that can be found on the Internet, including government and business data sources.

There is a tendency for everyone who writes about the Inter-

net to gush a bit over its ubiquitousness and capacity, and the author of this book is no exception; for example, there's a reference in the book's introduction to the fact that the president of the U.S. can be contacted at *president@whitehouse.gov*, but there's no revelation of the fact that sending mail there is a waste of time, as the mail is responded to by an automatic program that replies with a vapid form letter about how large the mail volume is and how it's impossible to respond to every query.

The third chapter, "The Desktop as Global Village," looks at how the Internet affects and assists the internationalization of business. To highlight this, the book cites four multinational corporations that use the Internet. IBM uses the net to disseminate information about its products, for example, and Oracle uses it to check the pulse of its customer base. Rockwell International uses the Internet for customer contact and as a means to communicate within the company.

Schlumberger uses the Internet to link up its far-flung sites (the company offers services to oil drilling operations, therefore its locations are many and far between), and is even thinking of running interactive video across the Internet, according to the book. (I wish the author had noted at this point that it probably *wouldn't* be a good idea to run video over the Internet. The Internet's entire bandwidth and structure are shared among millions of users, and the great demands of interactive video would probably spell the end of the Internet if it became a standard application. The net's bandwidth just can't support it.)

PICK THIS BOOK UP IF YOU WANT TO KNOW WHAT OTHER COMPANIES—AMONG THEM PERHAPS YOUR COMPETITORS—ARE DOING WITH THE INTERNET.

A look at how the Internet can improve customer contact is next, in "Reach Out and Touch—Everyone." The chapter relates how firms like J.P. Morgan improve customer contact with Internet mail, and how Internet tools like ftp (public access sources of files for file transfer) can assist in a company's marketing efforts. That's explored further with a later chapter called "Customer Connections," which offers some examples of very specific ways that companies use mail, gopher, and other Internet tools to get—and stay—closer to their customers.

"Transforming Research and Development" looks at what the Internet's doing these days in the area where it got started, namely telling stories of cooperation made possible by the network. "The Entrepreneurial Edge" shows that some companies aren't trying to use the Internet as a business tool; rather, they're trying to create new services *based* on the Internet. Automobiles created a service industry represented by thousands of gas pumps around the country; what will be the gas station of the Internet? How can you get rich on the Net? This chapter talks with some people who are trying to find out.

One such company is WAIS, Inc. One of the main problems with the Internet is that there's a lot of data there, but there's no central index, no "one-stop shopping" way to find where that data is, and no one way to access it. WAIS stands for Wide Area Information Server, and there already are public-access WAIS sites around the Internet. But Brewster Kahle's WAIS, Inc., adds value with more search power (parallel processing systems), as well as on-line and telephone support. It makes sense: the Internet is a thick jungle and WAIS, Inc., wants to be your native guide.

Finally, "Putting the Network to Work" offers some case studies of mythical businesses and how the Internet can help solve their problems and improve their operations and competitiveness. Cronin examines a prototypical large multinational manufacturing company, an imaginary small electronics firm, and a mythical medium-size company, and discusses how each of them can use the Internet to enhance its business opportunities.

There's not enough space here to recount all of the success stories that author Cronin relates, but there are lots of them. Pick this book up if you want to know what other companies—among them perhaps your competitors—are doing with the Internet. I have to give you fair warning, however: buying this book could turn out to be expensive for you. Before you finish reading it, you'll be convinced that hooking your company up to the Internet is a top priority. ◆

Mark Minasi has written extensively on OS/2. His consulting and training firm, Mark Minasi and Company, is based in Arlington, Virginia.

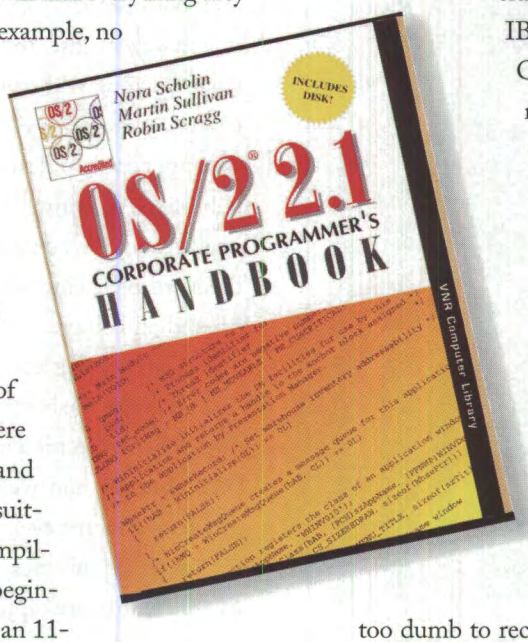
OS/2 2.1 Corporate Programmer's Handbook

by Nora Scholin, Martin Sullivan, and Robin Scragg, VNR Computer Library, Van Nostrand Reinhold, $39.95

REVIEWED BY RICK COOK

Forget the title. This is not a "programmer's handbook," corporate or otherwise. It is, rather, a brief introduction to some important terms and concepts in OS/2 programming. It would be most useful to managers and others who have to deal with OS/2 programmers and need to understand their jargon.

This isn't to say that even those people will find everything they need between these covers. There is, for example, no overview of OS/2 to give the reader a general concept of how it works, and many topics are either not covered or passed over briefly. One example: the only discussion of the High Performance File System (HPFS) amounts to two sentences in a section on installing HPFS.



The subjects covered and the depth of coverage are a bewildering mixture. There are chapters on setting up OS/2 2.1 and printing that are rather elementary, best suited for a beginning user. How to use a compiler gets an entire chapter at the absolute beginner level. The authors cover TCP/IP in an 11-page overview. Meanwhile, the built-in REXX language, one of OS/2's strong points, gets barely two sentences.

More than 120 pages of the 443-page volume are given over to a listing of OS/2 functions with their parameters, "to save you the time and hassle of looking up the parameters of each function you might use in your application"—not to mention padding the book.

When the authors do get down to business, the result is unspectacular but workmanlike. They do a solid job of introducing the reader to programming terms and concepts. The explanations are lucid and reading the relevant sections will provide you with the basics of the subjects covered. I came away with the frustrating feeling that lack of time and resources had more to do with this book than the authors' talents or knowledge.

There is, thus, a good discussion of creating user help systems for applications using the TAG language, as well as a good general discussion of the System Object Model, IBM's Common User Access interfaces, and OS/2 2.1's features for modular programming. With the possible exception of the section on help files, none of the discussions is detailed enough to be of any use to programmers. Nonetheless, they can all serve to explain the basic processes to a computer-literate person and familiarize him or her with the terms used when describing the OS/2 environment.

The book includes a number of code samples set in the spidery typewriter typeface that has become standard for such things, presumably on the assumption that readers are too dumb to recognize a listing unless it is printed to look like the screen of a dumb terminal. Like a lot of other books, this one compounds the felony by printing its listings on a shaded background to further suggest a computer screen circa 1975. What this presentation actually does is make the part of the book that needs to be read most carefully and accurately the most likely to give the reader a migraine.

At the back of the book the authors provide a sample application for maintaining an inventory in a warehouse. This isn't a useful program, as the authors freely admit in introducing it, but it does serve to show what an OS/2 application looks like when it

is strung together. Also included is a small application called Magic Window for setting up and managing a window under OS/2. This could be used as a template for testing and prototyping. The book comes with a disk that contains the code for the sub-modules used in these applications.

The book is priced at $39.95, but you'd never know it from looking at it. Like a lot of trade paperback publishers, VNR has quit printing the price anywhere on the book. This is an increasingly serious problem, since chain bookstores aren't marking prices on individual books either. The trend is to put a bar code on the book and keep the would-be purchaser guessing until he or she arrives at the cash register.

Overall, *OS/2 2.1 Corporate Programmer's Handbook* is good enough to be spared the trash can—the fate of about half the computer books I review. It earns precious shelf space as a quick reference source for those times when I need refreshing on the topics it does cover.

In a larger sense, though, this book is an excellent example of what is wrong with computer book publishing today. *OS/2 2.1 Corporate Programmer's Handbook* is no worse than a lot of the computer books out there, and VNR is no worse than most of the publishers. It's simply that too many books published today are uneven and don't deliver what their titles and jackets promise—the signs of having been commissioned as rush jobs, and then printed and shipped to the shelves regardless of how well they deliver on the original outline.

This is not the best way to provide useful, informative books. When the subject is a new development like OS/2 2.1, which is both complex and well-understood by only a few people, the problems become even more acute.

Given that this mess is standard in the computer book industry, "buyer beware" applies with special force. Never buy a computer book without careful examination and never rely on the title or table of contents alone to guide you. ◆

Rick Cook is a computer journalist and novelist based in Phoenix, Arizona.

continued fromn page 86

instead of a lower IRQ. Why don't more manufacturers make 16-bit mouse boards so we can relieve the IRQ crunch? So, before I could install OS/2, I had to purchase a bus mouse card and set it for IRQ 3. Then I partitioned my hard drive into a FAT drive for WinOS/2 and an HPFS drive for everything else and got through the installation with no other problems.

I played around with it for a while and found the system to be quite flaky. For instance, if I deleted a directory, even one which I had created myself, the desktop would die and the system would restart. Other flaky things kept happening and I was getting fed up with it. I tried reinstalling several times and it seemed like each installation was different. Some things that had worked in a previous installation didn't work now, and some things that did not work before, now worked with no problems. Well, at this point I was so frustrated with IBM and OS/2 that I was threatening to forget about OS/2 forever. Then I purchased another Quantum 245mb disk drive and reinstalled OS/2 for the umpteenth time. This time, I set up the first disk with BootManager and two HPFS partitions, one for OS/2 system files and the other for OS/2 applications. The second drive had one FAT partition which took up the whole drive, and on which I had all my DOS and Windows files. When I installed OS/2 this time, I did not install WinOS/2, only DOS support. This installation has been running for months and is very stable. I don't know if more disk area, or the lack of WinOS/2 has cured the problem, or if I just got lucky, but I would like to know whether anyone else has had stability problems that went away after an installation without WinOS/2.

Well, I was finally satisfied that OS/2 would work so I started adding to my system. I added a Logitech hand scanner, which I already owned but had removed before installing OS/2, and a Pro Audio Spectrum 16 sound card. I can't use the scanner from OS/2 since there are no drivers and I don't have WinOS/2 installed, but it doesn't seem to cause any problems, and the sound card works wonderfully. I think it works much better under OS/2 than under Windows. But a problem I have had since day one is that OS/2 refuses to recognize a 5.25-inch diskette that is not high density. On an earlier installation, when I tried to access the A: drive, OS/2 reported Requested Sector Not Found. If I removed the diskette and tried again, OS/2 reported the drive as not ready, then on inserting the diskette and trying a third time, OS/2 accessed the diskette with no problems. I got the same error on the B: drive, but removing the diskette, accessing the drive and reinserting the diskette did not work as it had on the A: drive. With this installation of OS/2, the A: drive works with both low and high density, but the B: drive will not work with low density, even though it works fine under DOS.

I feel sorry for IBM. A lot of people will blame OS/2 for problems which are really application errors.

The moral of all this is:

1. Nobody has a clue, even when problems occur with a company's own product.

2. There needs to be better and more thorough reviews of software. OS/2 probably unfairly gets blamed for crummy programs. IBM should be concerned. Programs ported to OS/2 from Windows or DOS are garbage and I will never, ever, ever again buy ported software.

3. There needs to be some quality assurance like what Underwriters Laboratories does for household appliances.

Keith Martin
Lynnwood, Washington

Back to Windows

I received my subscription to *OS/2 Professional* as a result of a friend of mine, who used OS/2, submitting my name. Apparently, his goal was to convince me that I was a complete moron for hanging on to my antiquated DOS/Windows environment.

Well, if I were to have read only your articles, I probably would have been persuaded to do just that, but I also went on to read the Input section. In the October 1993 issue, half of the letters were various and sundry complaints about the system! Not just "I don't like the feel of this or that," or "Why didn't they add such and so," but "It made my system crash repeatedly," "I couldn't get half of my software to run," "I had to completely upgrade/reconfigure my memory/Bios/software," etc. Serious stuff for those of us who use our PCs for business applications!

Starting with the assumption that the letters that you publish are a fair representation of those you receive, and further that they represent the general opinions of your readership, I must come to two conclusions. First, you are to be commended on your journalistic integrity which has been carried to a masochistic extreme. When a magazine that is designed for the expressed purpose of promoting a specific product devotes half of its letter page to serious criticisms of that product which would dissuade most reasonable people from purchasing it, that is truly an objective editorial policy.

My second conclusion is that IBM still does not have a clue of how to compete in the operating system marketplace! If it doesn't run on a standard system, it doesn't work. Period. Time to go back to the drawing board, boys and girls! If the average, reasonably computer-literate user has to spend more time trying to make the computer work than he does working on his computer, your system is a failure. All of the flashy advertising in the world won't change that. Some will indeed buy the system anyway, but if their experience is anything like that of most of your readers, they will never buy again. That is no way to run a business.

Needless to say, it will be some time until I decide to change my operating system. And the friend who was trying to convert me? He switched back. ◆

Stephen Trask
Mechanicsburg, Pennsylvania

DATA DATES

Seminars, Conventions, Expositions, and Conferences for the OS/2 Professional

FEBRUARY 7-9

STRATEGIC MANAGEMENT OF INFORMATION SYSTEMS

Washington, DC

This seminar is designed for information systems managers, members of a company's general management team, and line managers who are interested in improving their use of systems resources. It will be held at the Stouffer Concourse in Crystal City. The conference will address the topic of linking information system strategies with business strategies in order to gain a competitive edge. Barton Goldberg, president of Information Systems Marketing, Inc. and chairman of Information Systems Experts, will give the tutorial.

The price of this seminar is $995. Contact: Digital Consulting Inc., (508) 470-3870.

FEBRUARY 15-17

NETWORKS EXPO

Boston, MA

The Networks Expo, sponsored by NetWare Users International, LAN Times, and Bruno Blenheim, Inc., will be held at the Hynes Convention Center in Boston. Nine seminar tracks are planned with more than 80 sessions covering topics such as interoperability, applications, network management, and enterprise-wide networking. The keynote address, "Product Considerations for the Year 2000," will be presented by T. Travis Waltrip, vice president of the Telecommunications division of the Travelers Companies. In addition, hundreds of companies will be showcasing the latest computer networking hardware and software products.

The price of a full conference package, including one tutorial and three-day admission to seminars and exhibits, is $775; tutorial registration, which also includes three-day admission to exhibits, is $395. Seminar attendance and three-day admission to exhibits will cost $115 for one seminar, $300 for three, and $500 for the entire three days of seminar offerings. One-day exhibit admission will cost $30 and attending two or three days of exhibits will cost $60. Contact: Bruno Blenheim, Inc., (800) 829-3976.

FEBRUARY 15-17

CLIENT/SERVER WORKSHOP

Dallas, TX

This workshop at the Sheraton Park Central will address the issue of building GUI-based client/server systems. Participating software tool developers will include Easel Corporation, Texas Instruments, and WANG Laboratories. Scheduled to address attendees are Rich Finkelstein, president of Performance Computing, Inc.; Larry R. DeBoever, founder of DeBoever Architectures; and Christine Comaford, president of Corporate Computing, Inc.

The price of the workshop is $995. Contact: Digital Consulting Inc., (508) 470-3880.

FEBRUARY 15-18

EXPOCOMM MEXICO

Mexico City, Mexico

This event is designed for computer/communications equipment manufacturers and source companies who want to sell their products directly to Mexico's vast end user base of small and medium-sized businesses as well as large corporate users of computing networks and telecommunications.

Admission to the expo, which will be held at the Camino Real Hotel in Mexico City, is free. Contact: E.J. Krause Associates, Inc., (301) 986-7800, or Marketing International Corporation, (703) 527-8000.

FEBRUARY 16-18

SOFTWARE FAIRE EXPO

Portland, OR

Held in conjunction with the 15th Annual Office Systems and Business Expo, the Software Faire Expo will be held at the Oregon Convention Center. This year's theme is "The Total Office," and organizers say the show will feature more than 350 companies showing and selling the latest business products, equipment, and business services. The expo will include manufacturers, distributors, VARs, systems integrators, software manufacturers, and CAD/CAM experts. In addition, communications products, LANs, WANs, office machines, furniture, products, and software will be showcased. Contact: Brigette Burney, (503) 287-7541.

FEBRUARY 27-MARCH 3

CASE WORLD AND OBJEX ADVANCED APPLICATION DEVELOPMENT TECHNOLOGY CONFERENCE AND EXPOSITION

San Francisco, CA

Case World and Objex have teamed up to create a new conference and exhibition to be held at the Moscone Convention Center in San Francisco. Seven sessions are scheduled with topics ranging from Client/Server and Open Systems to Commercial Applications and Results. Special presentations will also be given by Peter Coad, chairman of Object International, and Tim Lister, founder and principal of Atlantic Systems Guild.

The cost of the conference and expo is $995. Contact: Digital Consulting Inc., (508) 470-3880.

FEBRUARY 27-MARCH 1

ISNI WORLD CONFERENCE AND EXPO

Freeport, Bahamas

The Independent Service Network International World Conference will take place at the Bahamas Princess Country Club. The conference, "ISO Margins and Market Share—Seizing Opportunities Today for 21st Century Growth," will focus on increasing profit margins and ISO market share today. The keynote address will be delivered by Joe Calloway, a former staff member of the House of Representatives and author of such training programs as "The Win Win Strategy" and "The Marketing Center Manager." Highlights of the conference include: Bundling Services for ISO, Emerging Technology, A Manufacturers Forum, Updates on Industry, Legal and Lobbying Activity, an Industry Leader Forum, Service Technology/21st century, ISO Benchmarking for Success, and Investing in Technology Today for Growth Tomorrow.

The cost of the conference is $695 for members and $895 for non-members. Exhibitor registration is $695 for members and $895 for non-members. Contact: ISNI Conference, (404) 885-9908.

FEBRUARY 28-MARCH 2

INTERCOM '94

Miami, FL

The seventh consecutive year of Intercom '94 will be held at the Hotel Intercontinental in Miami. The expo will concentrate on two topics: telecommunications and computer software and networking. Conference tracks will include: Executive briefing of IT markets in the Americas, technical seminars (ICIT certificates), and the Transamerica Telecommunications End-User conference. Participating will be delegates from regional associations such as CANTO, COMCITEL, and AMCEL/ALACEL.

The price of the conference is $595. Contact: LATCOM, Inc., (305) 670-9444 . ◆

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Circle #13

THE VIEW FROM CHAOS MANOR

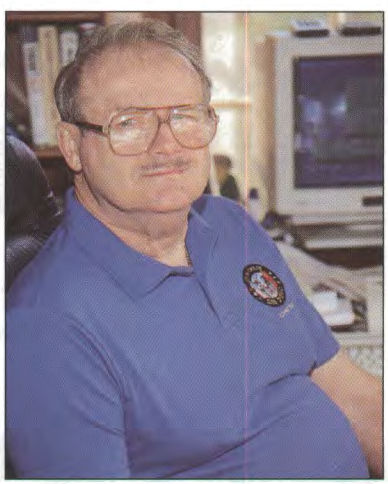
Playing the Ferengi Game

BY JERRY POURNELLE

Here we go again. OS/2 for Windows is what OS/2 ought to have been all along, and if IBM had done this earlier they'd have cleaned up. Of course, they don't seem to know what they have.

If you've never heard of OS/2 for Windows I don't blame you. IBM hasn't promoted it heavily, and they didn't name it properly. It ought to be called OS/2 for Windows Users: what IBM did was strip Windows out of OS/2, so that if you're a Windows user and you install the new OS/2 you keep your old Windows, complete with desktop and applications.

You can then move all your DOS applications to OS/2. They'll run a lot better. This is particularly noticeable with visual and sound-intensive games, which in Windows are either jerky and clunky or won't work at all. In OS/2 you can have several of your favorite DOS games running all at once.



Game developers tell me the interface with Windows wasn't designed to allow the kinds of things game developers like to do. One says the Windows environment is a step back to the Apple II. Now, you might not think games important, but consider: games are a good example of what hands-on multimedia is really like. Systems that don't run games well won't be so hot for educational software, and education software will be an increasingly significant part of the software market in future years. OS/2 for Windows Users gives IBM an opportunity. Now we'll see if Big Blue can make use of it.

The right thing to do is to abandon WIN-OS/2. Forget it. Leave it behind. Just make sure there's a timely OS/2 for Windows Users for every version of Windows, now and forever. In particular, do whatever it takes to get it working with Windows for Workgroups, and do that fast, because W4W 3.11 is a great improvement over Windows itself, and it incorporates some features bound to show up in the next Windows release. Moreover, W4W under OS/2 would be a neat solution to networking OS/2, Windows, and DOS users. Wherever W4W competes with big network installations, the same thing running under OS/2 would be even better.

Second, collect some of the great shareware packages and incorporate them into OS/2 itself. For instance: DOS communications software generally is superior to any Windows communications software I know. But communications don't multitask worth a darn under Windows. With OS/2, the communications package works all right, but if I play a game during a download the game is clunky, with long pauses when the cursor is frozen.

Fortunately, there's a remedy: get on almost any bulletin board and grab SIO102.ZIP (or whatever the latest version is by the time you read this), send in the registration fee, and follow instructions. You'll get excellent results.

There are lots of good shareware programs, and IBM ought to have someone evaluating them with a view toward bundling them.

Next, exploit OS/2's ability to let DOS games run wild. In particular, there needs to be a DOS session setting that lets application programs bypass VDMA and get directly to the hardware. VDMA protects you from badly done DMA operations, but there ought to be a way to turn that protection off for particular apps.

Next, give even more encouragement to third-party developers. Distribute developer kits at cost. If someone whispers that he can write OS/2 device drivers, slip a Developer CD-ROM in his pocket.

Finally, anticipate Microsoft. A few years ago we had to rename QEMM.SYS to use it with DOS because Microsoft coded the program name into the startup. Redmond may have gotten smarter since then, but maybe not: it won't do any harm to be ready for silly tricks.

Do all that and OS/2 for Windows Users can be the operating system for the rest of us. ◆

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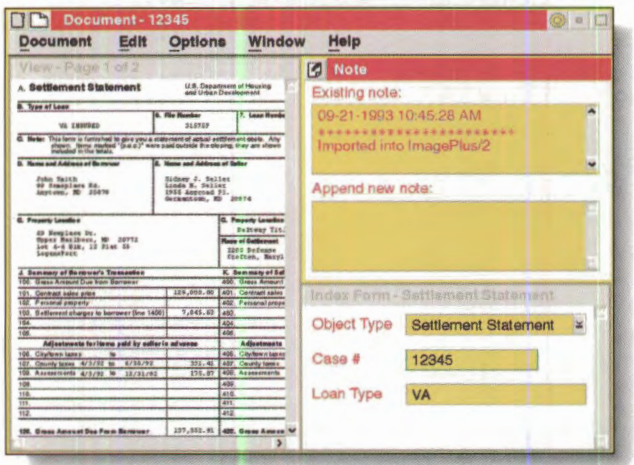

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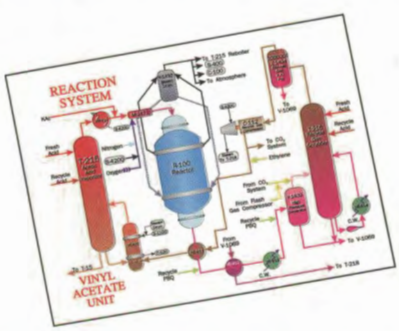

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